NOT FOR NEW DESIGN

General Purpose, Pulse and DC Transient Suppression

F461 – 464 Single Metallized Polypropylene Film

Overview

The F461 – 464 Series is a metallized polypropylene film encapsulated with self-extinguishing resin, in a box of material meeting the requirements of UL 94 V–0. Four different winding constructions are used depending on voltage and lead spacing. Please see Table 1 for more information.

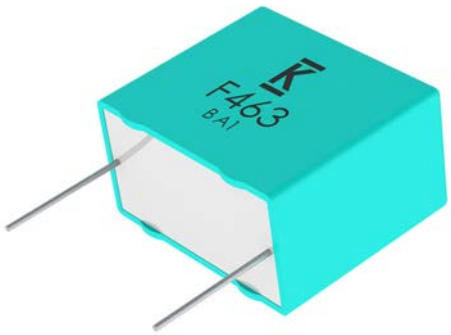
Applications

Typical applications include pulse operation in switched mode power supplies (SMPS), electrical ballasts, inverter high frequency filtering and other high frequency applications demanding stable operation.

ATTENTION -- This series was replaced by the R75 series. Please click on the link to the R75 series datasheet HERE.

Benefits

- Rated voltage: 160 – 2,500 VDC
- Rated voltage: 90 – 900 VAC
- Capacitance range: 0.001 – 56 µF
- Lead spacing: 5 – 37.5 mm
- Capacitance tolerance: ±5% and ±10%
- Climatic category: 55/105/56, IEC 60068–1
- Tape & Reel packaging in accordance with IEC 60286–2
- RoHS Compliant and lead-free terminations
- Category temperature range of –55°C to +105°C
- Rated temperature +85°C



Part Number System

F	46x	K	E	223	J	160	C
Capacitor Class	Series	Lead Spacing (mm)	Size Code	Capacitance Code (pF)	Capacitance Tolerance	Rated Voltage (VDC)	Packaging
F = Film	Metallized Polypropylene x = sections in construction	J = 5 K = 7.5 A = 10 B = 15 D = 22.5 F = 27.5 R = 37.5	See Dimension Table	First two digits represent significant figures. Third digit specifies number of zeros.	J = ±5% K = ±10%	160 = 160 250 = 250 400 = 400 630 = 630 1K0 = 1,000 1L2 = 1,250 1K6 = 1,600 2K0 = 2,000 2K5 = 2,500	See Ordering Options Table

© KEMET Electronics Corporation • KEMET Tower • One East Broward Boulevard
Fort Lauderdale, FL 33301 USA • 954-766-2800 • www.kemet.com

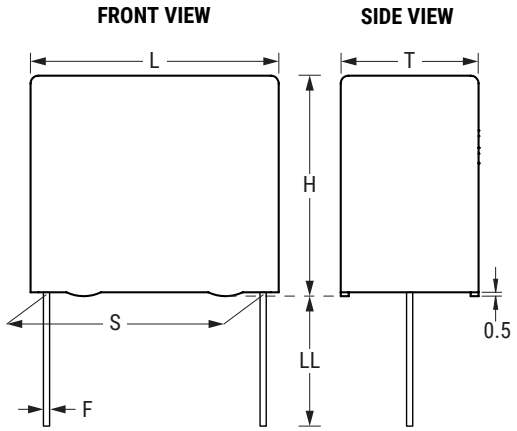
Ordering Options Table

Lead Spacing Nominal (mm)	Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
5	**Standard Lead and Packaging Options**		
	Bulk (Bag) – Short Leads	4 +2/–0	C
	Bulk (Bag) – Long Leads	17 +0/–1	A
	Tape & Reel (Standard Reel)	H_0= 18.5 ±0.5	L
	Other Lead and Packaging Options		
	Bulk (Bag) – Maximum Length Leads	20 +5/–0	ALL0L
	Ammo Pack	H_0= 18.5 ±0.5	R
7.5	**Standard Lead and Packaging Options**		
	Bulk (Bag) – Short Leads	4 +2/–0	C
	Bulk (Bag) – Long Leads	17 +0/–1	A
	Tape & Reel (Standard Reel)	H_0= 18.5 ±0.5	L
	Other Lead and Packaging Options		
	Bulk (Bag) – Maximum Length Leads	20 +5/–0	ALL0L
	Ammo Pack	H_0= 18.5 ±0.5	R
10	**Standard Lead and Packaging Options**		
	Bulk (Bag) – Short Leads	4 +2/–0	C
	Bulk (Bag) – Long Leads	17 +0/–1	A
	Tape & Reel (Standard Reel)	H_0= 18.5 ±0.5	L
	Other Lead and Packaging Options		
	Bulk (Bag) – Maximum Length Leads	20 +5/–0	ALL0L
	Ammo Pack	H_0= 18.5 ±0.5	R
	Tape & Reel (Large Reel)	H_0= 18.5 ±0.5	P
15	**Standard Lead and Packaging Options**		
	Bulk (Bag) – Short Leads	4 +2/–0	C
	Bulk (Bag) – Long Leads	17 +0/–1	A
	Pizza Pack	4 +2/–0	Z
	Other Lead and Packaging Options		
	Pizza – Short Leads	3.2 +0.3/–0.2	ZL32K
	Tape & Reel (Standard Reel)	H_0= 18.5 ±0.5	L
	Tape & Reel (Large Reel)	H_0= 18.5 ±0.5	P
	Bulk (Bag) – Maximum Length Leads	25 +5/–0	ALR0L
	Ammo Pack	H_0= 18.5 ±0.5	R

Ordering Options Table cont.

Lead Spacing Nominal (mm)	Type of Leads and Packaging	Lead Length (mm)	Lead and Packaging Code
22.5	**Standard Lead and Packaging Options**		
	Pizza – Long Leads	17 +0/–1	ZLH0J
	Pizza Pack	4 +2/–0	Z
	Other Lead and Packaging Options		
	Pizza – Short Leads	3.2 +0.3/–0.2	ZL32K
	Tape & Reel (Standard Reel)	H_0= 18.5 ±0.5	L
	Tape & Reel (Large Reel)	H_0= 18.5 ±0.5	P
	Ammo Pack	H_0= 18.5 ±0.5	R
27.5	**Standard Lead and Packaging Options**		
	Pizza – Long Leads	17 +0/–1	ZLH0J
	Other Lead and Packaging Options		
	Pizza Pack	4 +2/–0	Z
	Pizza – Short Leads	3.2 +0.3/–0.2	ZL32K
37.5	**Standard Lead and Packaging Options**		
	Pizza – Long Leads	17 +0/–1	ZLH0J
	Other Lead and Packaging Options		
	Pizza Pack	4 +2/–0	Z
	Pizza – Short Leads	3.2 +0.3/–0.2	ZL32K

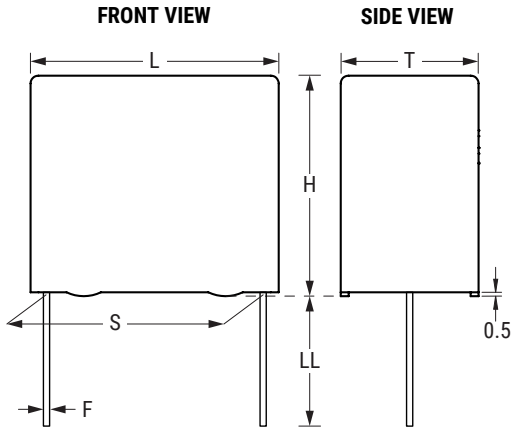
Dimensions – Millimeters



Size Code	S		T		H		L		F	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
JF	5.0	±0.4	2.5	0 / -0.5	6.5	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
JG	5.0	±0.4	3.5	0 / -0.5	7.5	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
JM	5.0	±0.4	4.5	0 / -0.5	9.5	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
JQ	5.0	±0.4	5.0	0 / -0.5	10.0	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
JT	5.0	±0.4	6.0	0 / -0.5	11.0	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
JU	5.0	±0.4	7.2	0 / -0.5	13.0	0 / -0.5	7.2	0 / -0.5	0.5	±0.05
KE	7.5	±0.4	2.5	0 / -0.5	6.0	0 / -0.5	10.0	0 / -0.5	0.6	±0.05
KF	7.5	±0.4	3.0	0 / -0.5	8.0	0 / -0.5	10.0	0 / -0.5	0.6	±0.05
KG	7.5	±0.4	4.0	0 / -0.5	8.0	0 / -0.5	10.0	0 / -0.5	0.6	±0.05
KJ	7.5	±0.4	5.0	0 / -0.5	10.5	0 / -0.5	10.0	0 / -0.5	0.6	±0.05
KM	7.5	±0.4	6.0	0 / -0.5	12.0	0 / -0.5	10.5	0 / -0.5	0.6	±0.05
AG	10.0	±0.4	4.0	0 / -0.5	9.0	0 / -0.5	13.0	0 / -0.5	0.6	±0.05
AK	10.0	±0.4	5.0	0 / -0.5	11.0	0 / -0.5	13.0	0 / -0.5	0.6	±0.05
AP	10.0	±0.4	6.0	0 / -0.5	12.0	0 / -0.5	13.0	0 / -0.5	0.6	±0.05
BB	15.0	±0.4	4.0	0 / -0.5	10.0	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BC	15.0	±0.4	5.0	0 / -0.5	11.0	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BE	15.0	±0.4	5.5	0 / -0.5	12.5	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BG	15.0	±0.4	6.0	0 / -0.5	12.0	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BK	15.0	±0.4	7.5	0 / -0.5	13.5	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BI	15.0	±0.4	6.0	0 / -0.5	17.5	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BP	15.0	±0.4	8.5	0 / -0.5	14.5	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BS	15.0	±0.4	10.0	0 / -0.5	16.0	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
BY	15.0	±0.4	11.0	0 / -0.5	19.0	0 / -0.5	18.0	0 / -0.5	0.8	±0.05
DB	22.5	±0.4	6.0	0 / -0.5	14.5	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DI	22.5	±0.4	7.0	0 / -0.5	16.0	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DH	22.5	±0.4	8.0	0 / -0.5	16.0	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DJ	22.5	±0.4	8.5	0 / -0.5	17.0	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DM	22.5	±0.4	9.0	0 / -0.5	18.5	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DO	22.5	±0.4	10.0	0 / -0.5	18.5	0 / -0.5	26.0	0 / -0.5	0.8	±0.05

Note: See Ordering Options Table for lead length (LL) options.

Dimensions – Millimeters cont.



Size Code	S		T		H		L		F	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
DP	22.5	±0.4	11.0	0 / -0.5	20.0	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DU	22.5	±0.4	13.0	0 / -0.5	22.0	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
DY	22.5	±0.4	15.5	0 / -0.5	24.5	0 / -0.5	26.0	0 / -0.5	0.8	±0.05
FB	27.5	±0.4	9.0	0 / -0.7	17.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FC	27.5	±0.4	11.0	0 / -0.7	20.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FI	27.5	±0.4	13.0	0 / -0.7	25.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FN	27.5	±0.4	14.0	0 / -0.7	28.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FR	27.5	±0.4	17.5	0 / -0.7	28.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FS	27.5	±0.4	19.0	0 / -0.7	29.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
FY	27.5	±0.4	22.0	0 / -0.7	37.0	0 / -0.7	31.5	0 / -0.7	0.8	±0.05
RB	37.5	±0.5	11.0	0 / -0.7	22.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RF	37.5	±0.5	13.0	0 / -0.7	24.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RH	37.5	±0.5	15.0	0 / -0.7	26.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RC	37.5	±0.5	16.0	0 / -0.7	28.5	0 / -0.7	41.0	0 / -0.7	1	±0.05
RD	37.5	±0.5	19.0	0 / -0.7	32.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RP	37.5	±0.5	21.0	0 / -0.7	38.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RO	37.5	±0.5	24.0	0 / -0.7	44.0	0 / -0.7	41.0	0 / -0.7	1	±0.05
RU	37.5	±0.5	30.0	0 / -0.7	45.0	0 / -0.7	41.0	0 / -0.7	1	±0.05

Note: See Ordering Options Table for lead length (LL) options.

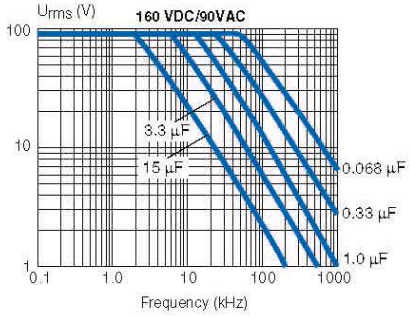
Performance Characteristics

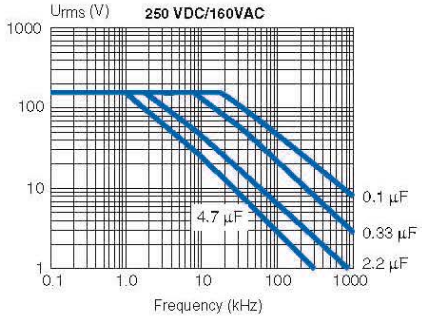
Series	F461	F461	F461	F461	F462	F462	F463	F462	F463	F463	F464
Sections	1	1	1	1	2	2	3	2	3	3	4
Voltage Range (VDC)	160	250	400	630	1,000	1,250	1,250	1,600	1,600	2,000	2,500
Voltage Range (VAC)	90	160	220	250	300	400	500	500	650	700	900
Capacitance Range (µF)	0.01 – 56	0.01 – 39	0.0033 – 18	0.0015 – 8.2	0.0047 – 3.9	0.0033 – 2.7	0.0047 – 2.2	0.001 – 1.5	0.0033 – 1.5	0.0010 – 0.82	0.001 – 0.56
Capacitance Values	In accordance with IEC E12 series										
Capacitance Tolerance	±5%, ±10%										
Category Temperature Range	–55°C to +105°C										
Rated Temperature	+85°C										
Voltage Derating DC	The rated voltage is decreased with 2.0%/°C between +85°C and +105°C										
Voltage Derating AC	The voltage is decreased with 1.25%/°C between +85°C and +105°C										
Climatic Category	IEC 60068–1, 55/105/56										
Passive Flammability	Category B or C according to IEC 60384–1 depending on size										
Maximum Pulse Steepness	dV/dt according to Table 1. For peak to peak voltages lower than rated voltage ($V_{PP} < V_R$), the specified dV/dt can be multiplied by the factor V_R/V_{PP}.										
Temperature Coefficient	–200 (+50, –100) ppm/°C (at 1 kHz)										
Self-Inductance	Approximately 6 nH/cm for the total length of capacitor winding and the leads										

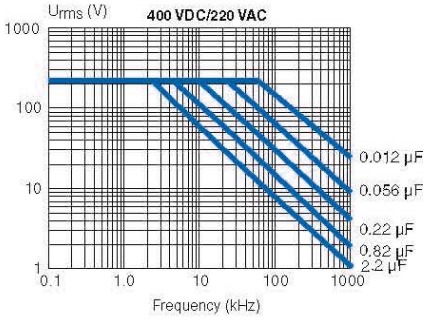
Dissipation Factor tand	Maximum Values at +23°C			
		C ≤ 0.1 µF	0.1 µF < C ≤ 1.0 µF	C > 1.0 µF
	1 kHz	0.0005	0.0005	0.001
	10 kHz	0.0006	0.0008	–
	100 kHz	0.0025	–	–

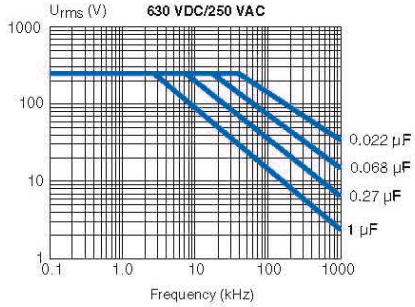
Insulation Resistance	Measured at +23°C, 100 VDC 60 seconds for $V_R < 500$ VDC and at 500 VDC for $V_R \geq 500$ VDC	
	Minimum Values Between Terminals	
	C ≤ 0.33 µF	≥ 100,000 MΩ
	C > 0.33 µF	≥ 30,000 MΩ • µF
	Minimum Values Between Terminals and Case	
		≥ 100,000 MΩ

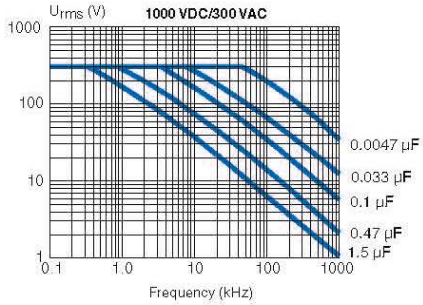
Derating of V_{rms} vs. Frequency, +85°C Ambient Temperature and 10°C Internal Heating, Typical Values

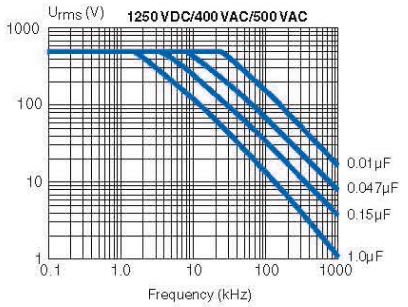


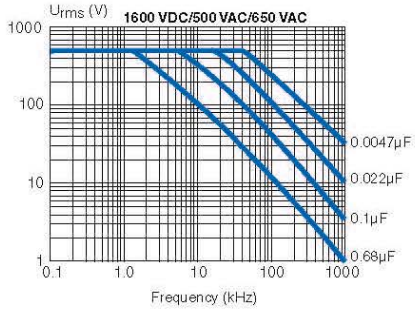


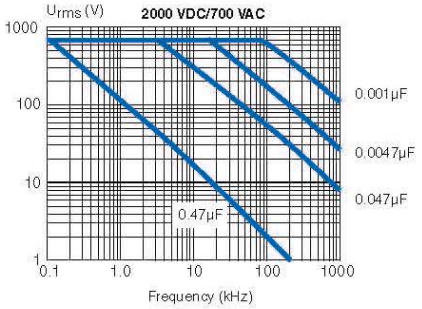


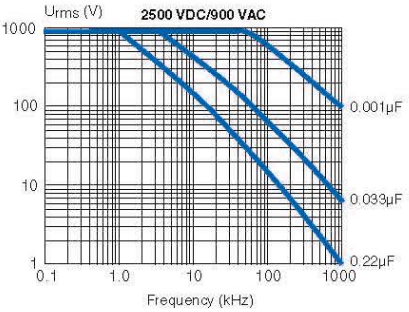












Environmental Test Data

Test	IEC Publication	Procedure	Requirements
Voltage Proof	60384–1 Clause 4.6	1.6 x V_R after 60 seconds	The capacitors must withstand the voltage without breakdowns or flashovers and without decreased insulation resistance below the value in each detail specification. No visible damage
	Clause 4.6 2.3	2 x V_R (minimum 400 VDC to case) after 60 seconds	As above
Vibration	60068–2–6 Test Fc	6 hours with 10 – 500 Hz and 0.75 mm amplitude or 98 m/s^2 depending on frequency	No visible damage tanδ ≤ 1.2 x stated value at 100 kHz Δ C/C ≤ ±0.5%
Bump	60068–2–29 Test Eb	4,000 bumps with 390 m/s^2 mounted on PCB	Δ C/C ≤ ±0.5% tanδ ≤ 1.2 x stated value at 100 kHz Insulation resistance: ≥ 100,000 MΩ for C_R ≤ 0.33 µF ≥ 30,000 MΩ, µF for C_R > 0.33 µF
Resistance to Soldering Heat	60068–2–20 Method 1A	Solder bath at +260°C ±5°C with screening	Immersion of the terminations into the solder bath shall be completed in a time not exceeding 1 second and the terminations shall remain immersed to the specified depth for 10 +1 second and then be withdrawn. Δ C/C ≤ ±1.0% tanδ increase < 0.001 No visible damage
Climatic Sequence	60384–1 Paragraph 4:21	60068–2.2 dry heat 16 hours 60068–2–34 damp heat, one cycle, 60068–2–1 Test Aa 2 hours	Insulation resistance: ≥ 100,000 MΩ for C_R ≤ 0.33 µF ≥ 30,000 MΩ, µF for C_R > 0.33 µF Δ C/C ≤ ±0.5% tanδ ≤ 1.2 x stated value at 100 kHz
Damp Heat Steady State	60068–2–3 Test Ca	+40°C and 90% – D1095% RH	56 days no visible damage Insulation resistance: ≥ 50,000 MΩ for C_R ≤ 0.33 µF ≥ 15,000 MΩ • µF for C_R > 0.33 µF Δ C/C ≤ ±1% tanδ ≤ 1.2 x stated value at 100 kHz
Endurance, AC		1,000 hours at +85°C and 1.25 x V_R AC	No visible damage Δ C/C ≤ ±3% tanδ ≤ 1.5 x stated value at 100 kHz Insulation resistance: ≥ 100,000 MΩ for C_R ≤ 0.33 µF ≥ 30,000 MΩ, µF for C_R > 0.33 µF
Charge and Discharge	60384–17 Paragraph 4.13	10,000 pulses and with (2 x) dV/dt according to detail specification	tanδ (100 kHz) ≤ 2 x stated value (100 kHz) Δ C/C ≤ ±0.5% Insulation resistance: ≥ 50,000 MΩ for C_R ≤ 0.33 µF ≥ 15,000 MΩ, µF for C_R > 0.33 µF

Environmental Compliance

All KEMET MKP capacitors in green boxes are RoHS Compliant and Halogen Free.

Table 1 – Ratings & Part Number Reference

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
160	90	0.01	JF	2.5	6.5	7.2	5	100	F461JF103(1)160(2)
160	90	0.012	JF	2.5	6.5	7.2	5	100	F461JF123(1)160(2)
160	90	0.015	JF	2.5	6.5	7.2	5	100	F461JF153(1)160(2)
160	90	0.018	JF	2.5	6.5	7.2	5	100	F461JF183(1)160(2)
160	90	0.022	JG	3.5	7.5	7.2	5	100	F461JG223(1)160(2)
160	90	0.027	JG	3.5	7.5	7.2	5	100	F461JG273(1)160(2)
160	90	0.033	JG	3.5	7.5	7.2	5	100	F461JG333(1)160(2)
160	90	0.039	JG	3.5	7.5	7.2	5	100	F461JG393(1)160(2)
160	90	0.047	JM	4.5	9.5	7.2	5	100	F461JM473(1)160(2)
160	90	0.056	JM	4.5	9.5	7.2	5	100	F461JM563(1)160(2)
160	90	0.068	JM	4.5	9.5	7.2	5	100	F461JM683(1)160(2)
160	90	0.082	JM	4.5	9.5	7.2	5	100	F461JM823(1)160(2)
160	90	0.1	JT	6	11	7.2	5	100	F461JT104(1)160(2)
160	90	0.12	JT	6	11	7.2	5	100	F461JT124(1)160(2)
160	90	0.15	JU	7.2	13	7.2	5	100	F461JU154(1)160(2)
160	90	0.18	JU	7.2	13	7.2	5	100	F461JU184(1)160(2)
160	90	0.22	JU	7.2	13	7.2	5	100	F461JU224(3)160(2)
160	90	0.015	KE	2.5	6	10	7.5	300	F461KE153(1)160(2)
160	90	0.018	KE	2.5	6	10	7.5	300	F461KE183(1)160(2)
160	90	0.022	KE	2.5	6	10	7.5	300	F461KE223(1)160(2)
160	90	0.027	KF	3	8	10	7.5	300	F461KF273(1)160(2)
160	90	0.033	KF	3	8	10	7.5	300	F461KF333(1)160(2)
160	90	0.039	KF	3	8	10	7.5	300	F461KF393(1)160(2)
160	90	0.047	KF	3	8	10	7.5	300	F461KF473(1)160(2)
160	90	0.056	KF	3	8	10	7.5	300	F461KF563(1)160(2)
160	90	0.068	KG	4	8	10	7.5	300	F461KG683(1)160(2)
160	90	0.082	KG	4	8	10	7.5	300	F461KG823(1)160(2)
160	90	0.1	KJ	5	10.5	10	7.5	300	F461KJ104(1)160(2)
160	90	0.12	KJ	5	10.5	10	7.5	300	F461KJ124(1)160(2)
160	90	0.15	KJ	5	10.5	10	7.5	300	F461KJ154(1)160(2)
160	90	0.18	KJ	5	10.5	10	7.5	300	F461KJ184(1)160(2)
160	90	0.22	KM	6	12	10.5	7.5	300	F461KM224(1)160(2)
160	90	0.27	KM	6	12	10.5	7.5	300	F461KM274(1)160(2)
160	90	0.1	AG	4	9	13	10	180	F461AG104(1)160(2)
160	90	0.12	AG	4	9	13	10	180	F461AG124(1)160(2)
160	90	0.15	AG	4	9	13	10	180	F461AG154(1)160(2)
160	90	0.18	AK	5	11	13	10	180	F461AK184(1)160(2)
160	90	0.22	AK	5	11	13	10	180	F461AK224(1)160(2)
160	90	0.27	AK	5	11	13	10	180	F461AK274(1)160(2)
160	90	0.33	AP	6	12	13	10	180	F461AP334(1)160(2)
160	90	0.39	AP	6	12	13	10	180	F461AP394(1)160(2)
160	90	0.47	AP	6	12	13	10	180	F461AP474(1)160(2)
160	90	0.15	BB	4	10	18	15	100	F461BB154(1)160(2)
160	90	0.18	BB	4	10	18	15	100	F461BB184(1)160(2)
160	90	0.22	BB	4	10	18	15	100	F461BB224(1)160(2)
160	90	0.27	BB	4	10	18	15	100	F461BB274(1)160(2)
160	90	0.33	BC	5	11	18	15	100	F461BC334(1)160(2)
160	90	0.39	BC	5	11	18	15	100	F461BC394(1)160(2)
160	90	0.47	BE	5.5	12.5	18	15	100	F461BE474(1)160(2)
160	90	0.56	BE	5.5	12.5	18	15	100	F461BE564(1)160(2)
160	90	0.68	BK	7.5	13.5	18	15	100	F461BK684(1)160(2)
160	90	0.82	BK	7.5	13.5	18	15	100	F461BK824(1)160(2)
160	90	1	BK	7.5	13.5	18	15	100	F461BK105(1)160(2)
160	90	1.2	BP	8.5	14.5	18	15	100	F461BP125(1)160(2)
160	90	1.5	BS	10	16	18	15	100	F461BS155(1)160(2)
160	90	2.2	BY	11	19	18	15	100	F461BY225(1)160(2)
160	90	2.7	BY	11	19	18	15	100	F461BY275(1)160(2)
160	90	1	DB	6	14.5	26	22.5	60	F461DB105(1)160(2)
160	90	1.2	DB	6	14.5	26	22.5	60	F461DB125(1)160(2)
160	90	1.5	DI	7	16	26	22.5	60	F461DI155(1)160(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
160	90	1.8	DI	7	16	26	22.5	60	F461DI185(1)160(2)
160	90	2.2	DJ	8.5	17	26	22.5	60	F461DJ225(1)160(2)
160	90	2.7	DM	9	18.5	26	22.5	60	F461DM275(1)160(2)
160	90	3.3	DM	9	18.5	26	22.5	60	F461DM335(1)160(2)
160	90	3.9	DP	11	20	26	22.5	60	F461DP395(1)160(2)
160	90	4.7	DU	13	22	26	22.5	60	F461DU475(1)160(2)
160	90	5.6	DU	13	22	26	22.5	60	F461DU565(1)160(2)
160	90	6.8	DY	15.5	24.5	26	22.5	60	F461DY685(1)160(2)
160	90	8.2	DY	15.5	24.5	26	22.5	60	F461DY825(1)160(2)
160	90	2.2	FB	9	17	31.5	27.5	50	F461FB225(1)160(2)
160	90	2.7	FB	9	17	31.5	27.5	50	F461FB275(1)160(2)
160	90	3.3	FB	9	17	31.5	27.5	50	F461FB335(1)160(2)
160	90	3.9	FC	11	20	31.5	27.5	50	F461FC395(1)160(2)
160	90	4.7	FC	11	20	31.5	27.5	50	F461FC475(1)160(2)
160	90	5.6	FI	13	25	31.5	27.5	50	F461FI565(1)160(2)
160	90	6.8	FI	13	25	31.5	27.5	50	F461FI685(1)160(2)
160	90	8.2	FI	13	25	31.5	27.5	50	F461FI825(1)160(2)
160	90	10	FR	17.5	28	31.5	27.5	50	F461FR106(1)160(2)
160	90	12	FR	17.5	28	31.5	27.5	50	F461FR126(1)160(2)
160	90	15	FY	22	37	31.5	27.5	50	F461FY156(1)160(2)
160	90	18	FY	22	37	31.5	27.5	50	F461FY186(1)160(2)
160	90	22	FY	22	37	31.5	27.5	50	F461FY226(1)160(2)
160	90	6.8	RB	11	22	41	37.5	35	F461RB685(1)160(2)
160	90	8.2	RB	11	22	41	37.5	35	F461RB825(1)160(2)
160	90	10	RF	13	24	41	37.5	35	F461RF106(1)160(2)
160	90	12	RH	15	26	41	37.5	35	F461RH126(1)160(2)
160	90	15	RC	16	28.5	41	37.5	35	F461RC156(1)160(2)
160	90	18	RD	19	32	41	37.5	35	F461RD186(1)160(2)
160	90	22	RD	19	32	41	37.5	35	F461RD226(1)160(2)
160	90	27	RP	21	38	41	37.5	35	F461RP276(1)160(2)
160	90	33	RO	24	44	41	37.5	35	F461RO336(1)160(2)
160	90	39	RO	24	44	41	37.5	35	F461RO396(1)160(2)
160	90	47	RU	30	45	41	37.5	35	F461RU476(1)160(2)
160	90	56	RU	30	45	41	37.5	35	F461RU566(1)160(2)
250	160	0.01	JF	2.5	6.5	7.2	5	250	F461JF103(1)250(2)
250	160	0.012	JF	2.5	6.5	7.2	5	250	F461JF123(1)250(2)
250	160	0.015	JF	2.5	6.5	7.2	5	250	F461JF153(1)250(2)
250	160	0.022	JG	3.5	7.5	7.2	5	250	F461JG223(1)250(2)
250	160	0.027	JG	3.5	7.5	7.2	5	250	F461JG273(1)250(2)
250	160	0.033	JM	4.5	9.5	7.2	5	250	F461JM333(1)250(2)
250	160	0.039	JM	4.5	9.5	7.2	5	250	F461JM393(1)250(2)
250	160	0.047	JQ	5	10	7.2	5	250	F461JQ473(1)250(2)
250	160	0.056	JQ	5	10	7.2	5	250	F461JQ563(1)250(2)
250	160	0.068	JT	6	11	7.2	5	250	F461JT683(1)250(2)
250	160	0.082	JT	6	11	7.2	5	250	F461JT823(1)250(2)
250	160	0.1	JU	7.2	13	7.2	5	250	F461JU104(1)250(2)
250	160	0.12	JU	7.2	13	7.2	5	250	F461JU124(1)250(2)
250	160	0.15	JU	7.2	13	7.2	5	250	F461JU154(1)250(2)
250	160	0.01	KE	2.5	6	10	7.5	650	F461KE103(1)250(2)
250	160	0.012	KE	2.5	6	10	7.5	650	F461KE123(1)250(2)
250	160	0.015	KF	3	8	10	7.5	650	F461KF153(1)250(2)
250	160	0.018	KF	3	8	10	7.5	650	F461KF183(1)250(2)
250	160	0.022	KF	3	8	10	7.5	650	F461KF223(1)250(2)
250	160	0.027	KF	3	8	10	7.5	650	F461KF273(1)250(2)
250	160	0.033	KF	3	8	10	7.5	650	F461KF333(1)250(2)
250	160	0.039	KG	4	8	10	7.5	650	F461KG393(1)250(2)
250	160	0.047	KG	4	8	10	7.5	650	F461KG473(1)250(2)
250	160	0.056	KG	4	8	10	7.5	650	F461KG563(1)250(2)
250	160	0.068	KJ	5	10.5	10	7.5	650	F461KJ683(1)250(2)
250	160	0.082	KJ	5	10.5	10	7.5	650	F461KJ823(1)250(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
250	160	0.1	KJ	5	10.5	10	7.5	650	F461KJ104(1)250(2)
250	160	0.12	KM	6	12	10.5	7.5	650	F461KM124(1)250(2)
250	160	0.15	KM	6	12	10.5	7.5	650	F461KM154(1)250(2)
250	160	0.068	AG	4	9	13	10	550	F461AG683(1)250(2)
250	160	0.082	AG	4	9	13	10	550	F461AG823(1)250(2)
250	160	0.1	AG	4	9	13	10	550	F461AG104(1)250(2)
250	160	0.12	AK	5	11	13	10	550	F461AK124(1)250(2)
250	160	0.15	AK	5	11	13	10	550	F461AK154(1)250(2)
250	160	0.18	AK	5	11	13	10	550	F461AK184(1)250(2)
250	160	0.22	AP	6	12	13	10	550	F461AP224(1)250(2)
250	160	0.27	AP	6	12	13	10	550	F461AP274(1)250(2)
250	160	0.1	BB	4	10	18	15	300	F461BB104(1)250(2)
250	160	0.12	BB	4	10	18	15	300	F461BB124(1)250(2)
250	160	0.15	BB	4	10	18	15	300	F461BB154(1)250(2)
250	160	0.18	BB	4	10	18	15	300	F461BB184(1)250(2)
250	160	0.22	BC	5	11	18	15	300	F461BC224(1)250(2)
250	160	0.27	BC	5	11	18	15	300	F461BC274(1)250(2)
250	160	0.33	BG	6	12	18	15	300	F461BG334(1)250(2)
250	160	0.39	BK	7.5	13.5	18	15	300	F461BK394(1)250(2)
250	160	0.47	BK	7.5	13.5	18	15	300	F461BK474(1)250(2)
250	160	0.56	BK	7.5	13.5	18	15	300	F461BK564(1)250(2)
250	160	0.68	BP	8.5	14.5	18	15	300	F461BP684(1)250(2)
250	160	0.82	BP	8.5	14.5	18	15	300	F461BP824(1)250(2)
250	160	1	BS	10	16	18	15	300	F461BS105(1)250(2)
250	160	1.2	BY	11	19	18	15	300	F461BY125(1)250(2)
250	160	1.5	BY	11	19	18	15	300	F461BY155(1)250(2)
250	160	1.8	BY	11	19	18	15	300	F461BY185(1)250(2)
250	160	0.47	DB	6	14.5	26	22.5	125	F461DB474(1)250(2)
250	160	0.56	DB	6	14.5	26	22.5	125	F461DB564(1)250(2)
250	160	0.68	DB	6	14.5	26	22.5	125	F461DB684(1)250(2)
250	160	0.82	DI	7	16	26	22.5	125	F461DI824(1)250(2)
250	160	1	DI	7	16	26	22.5	125	F461DI105(1)250(2)
250	160	1.2	DH	8	16	26	22.5	125	F461DH125(1)250(2)
250	160	1.5	DM	9	18.5	26	22.5	125	F461DM155(1)250(2)
250	160	1.8	DM	9	18.5	26	22.5	125	F461DM185(1)250(2)
250	160	2.2	DO	10	18.5	26	22.5	125	F461DO225(1)250(2)
250	160	2.7	DU	13	22	26	22.5	125	F461DU275(1)250(2)
250	160	3.3	DU	13	22	26	22.5	125	F461DU335(1)250(2)
250	160	3.9	DY	15.5	24.5	26	22.5	125	F461DY395(1)250(2)
250	160	4.7	DY	15.5	24.5	26	22.5	125	F461DY475(1)250(2)
250	160	5.6	DY	15.5	24.5	26	22.5	125	F461DY565(1)250(2)
250	160	1.5	FB	9	17	31.5	27.5	100	F461FB155(1)250(2)
250	160	1.8	FB	9	17	31.5	27.5	100	F461FB185(1)250(2)
250	160	2.2	FC	11	20	31.5	27.5	100	F461FC225(1)250(2)
250	160	2.7	FC	11	20	31.5	27.5	100	F461FC275(1)250(2)
250	160	3.3	FC	11	20	31.5	27.5	100	F461FC335(1)250(2)
250	160	3.9	FI	13	25	31.5	27.5	100	F461FI395(1)250(2)
250	160	4.7	FI	13	25	31.5	27.5	100	F461FI475(1)250(2)
250	160	5.6	FN	14	28	31.5	27.5	100	F461FN565(1)250(2)
250	160	6.8	FR	17.5	28	31.5	27.5	100	F461FR685(1)250(2)
250	160	8.2	FS	19	29	31.5	27.5	100	F461FS825(1)250(2)
250	160	10	FY	22	37	31.5	27.5	100	F461FY106(1)250(2)
250	160	12	FY	22	37	31.5	27.5	100	F461FY126(1)250(2)
250	160	15	FY	22	37	31.5	27.5	100	F461FY156(1)250(2)
250	160	3.3	RB	11	22	41	37.5	40	F461RB335(1)250(2)
250	160	3.9	RB	11	22	41	37.5	40	F461RB395(1)250(2)
250	160	4.7	RB	11	22	41	37.5	40	F461RB475(1)250(2)
250	160	5.6	RF	13	24	41	37.5	40	F461RF565(1)250(2)
250	160	6.8	RF	13	24	41	37.5	40	F461RF685(1)250(2)
250	160	8.2	RH	15	26	41	37.5	40	F461RH825(1)250(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
250	160	10	RC	16	28.5	41	37.5	40	F461RC106(1)250(2)
250	160	12	RD	19	32	41	37.5	40	F461RD126(1)250(2)
250	160	15	RD	19	32	41	37.5	40	F461RD156(1)250(2)
250	160	18	RP	21	38	41	37.5	40	F461RP186(1)250(2)
250	160	22	RO	24	44	41	37.5	40	F461RO226(1)250(2)
250	160	27	RO	24	44	41	37.5	40	F461RO276(1)250(2)
250	160	33	RU	30	45	41	37.5	40	F461RU336(1)250(2)
250	160	39	RU	30	45	41	37.5	40	F461RU396(1)250(2)
400	220	0.0033	JF	2.5	6.5	7.2	5	400	F461JF332(1)400(2)
400	220	0.0039	JF	2.5	6.5	7.2	5	400	F461JF392(1)400(2)
400	220	0.0047	JF	2.5	6.5	7.2	5	400	F461JF472(1)400(2)
400	220	0.0056	JF	2.5	6.5	7.2	5	400	F461JF562(1)400(2)
400	220	0.0068	JG	3.5	7.5	7.2	5	400	F461JG682(1)400(2)
400	220	0.0082	JG	3.5	7.5	7.2	5	400	F461JG822(1)400(2)
400	220	0.01	JG	3.5	7.5	7.2	5	400	F461JG103(1)400(2)
400	220	0.012	JG	3.5	7.5	7.2	5	400	F461JG123(1)400(2)
400	220	0.015	JM	4.5	9.5	7.2	5	400	F461JM153(1)400(2)
400	220	0.018	JM	4.5	9.5	7.2	5	400	F461JM183(1)400(2)
400	220	0.022	JM	4.5	9.5	7.2	5	400	F461JM223(1)400(2)
400	220	0.027	JQ	5	10	7.2	5	400	F461JQ273(1)400(2)
400	220	0.033	JT	6	11	7.2	5	400	F461JT333(1)400(2)
400	220	0.039	JT	6	11	7.2	5	400	F461JT393(1)400(2)
400	220	0.047	JU	7.2	13	7.2	5	400	F461JU473(1)400(2)
400	220	0.056	JU	7.2	13	7.2	5	400	F461JU563(1)400(2)
400	220	0.0033	KE	2.5	6	10	7.5	1,500	F461KE332(1)400(2)
400	220	0.0039	KE	2.5	6	10	7.5	1,500	F461KE392(1)400(2)
400	220	0.0047	KE	2.5	6	10	7.5	1,500	F461KE472(1)400(2)
400	220	0.0056	KF	3	8	10	7.5	1,500	F461KF562(1)400(2)
400	220	0.0068	KF	3	8	10	7.5	1,500	F461KF682(1)400(2)
400	220	0.0082	KF	3	8	10	7.5	1,500	F461KF822(1)400(2)
400	220	0.01	KF	3	8	10	7.5	1,500	F461KF103(1)400(2)
400	220	0.012	KF	3	8	10	7.5	1,500	F461KF123(1)400(2)
400	220	0.015	KG	4	8	10	7.5	1,500	F461KG153(1)400(2)
400	220	0.018	KG	4	8	10	7.5	1,500	F461KG183(1)400(2)
400	220	0.022	KG	4	8	10	7.5	1,500	F461KG223(1)400(2)
400	220	0.027	KJ	5	10.5	10	7.5	1,500	F461KJ273(1)400(2)
400	220	0.033	KJ	5	10.5	10	7.5	1,500	F461KJ333(1)400(2)
400	220	0.039	KJ	5	10.5	10	7.5	1,500	F461KJ393(1)400(2)
400	220	0.047	KJ	5	10.5	10	7.5	1,500	F461KJ473(1)400(2)
400	220	0.056	KM	6	12	10.5	7.5	1,500	F461KM563(1)400(2)
400	220	0.068	KM	6	12	10.5	7.5	1,500	F461KM683(1)400(2)
400	220	0.022	AG	4	9	13	10	1,300	F461AG223(1)400(2)
400	220	0.027	AG	4	9	13	10	1,300	F461AG273(1)400(2)
400	220	0.033	AG	4	9	13	10	1,300	F461AG333(1)400(2)
400	220	0.039	AG	4	9	13	10	1,300	F461AG393(1)400(2)
400	220	0.047	AK	5	11	13	10	1,300	F461AK473(1)400(2)
400	220	0.056	AK	5	11	13	10	1,300	F461AK563(1)400(2)
400	220	0.068	AK	5	11	13	10	1,300	F461AK683(1)400(2)
400	220	0.082	AK	5	11	13	10	1,300	F461AK823(1)400(2)
400	220	0.1	AP	6	12	13	10	1,300	F461AP104(1)400(2)
400	220	0.12	AP	6	12	13	10	1,300	F461AP124(1)400(2)
400	220	0.047	BB	4	10	18	15	900	F461BB473(1)400(2)
400	220	0.056	BB	4	10	18	15	900	F461BB563(1)400(2)
400	220	0.068	BB	4	10	18	15	900	F461BB683(1)400(2)
400	220	0.082	BC	5	11	18	15	900	F461BC823(1)400(2)
400	220	0.1	BC	5	11	18	15	900	F461BC104(1)400(2)
400	220	0.12	BE	5.5	12.5	18	15	900	F461BE124(1)400(2)
400	220	0.15	BE	5.5	12.5	18	15	900	F461BE154(1)400(2)
400	220	0.18	BK	7.5	13.5	18	15	900	F461BK184(1)400(2)
400	220	0.22	BK	7.5	13.5	18	15	900	F461BK224(1)400(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
400	220	0.27	BK	7.5	13.5	18	15	900	F461BK274(1)400(2)
400	220	0.33	BI	6	17.5	18	15	900	F461BI334(1)400(2)
400	220	0.39	BS	10	16	18	15	900	F461BS394(1)400(2)
400	220	0.47	BS	10	16	18	15	900	F461BS474(1)400(2)
400	220	0.56	BY	11	19	18	15	900	F461BY564(1)400(2)
400	220	0.68	BY	11	19	18	15	900	F461BY684(1)400(2)
400	220	0.82	BY	11	19	18	15	900	F461BY824(1)400(2)
400	220	0.22	DB	6	14.5	26	22.5	300	F461DB224(1)400(2)
400	220	0.27	DB	6	14.5	26	22.5	300	F461DB274(1)400(2)
400	220	0.33	DB	6	14.5	26	22.5	300	F461DB334(1)400(2)
400	220	0.39	DI	7	16	26	22.5	300	F461DI394(1)400(2)
400	220	0.47	DI	7	16	26	22.5	300	F461DI474(1)400(2)
400	220	0.56	DH	8	16	26	22.5	300	F461DH564(1)400(2)
400	220	0.68	DM	9	18.5	26	22.5	300	F461DM684(1)400(2)
400	220	0.82	DM	9	18.5	26	22.5	300	F461DM824(1)400(2)
400	220	1	DP	11	20	26	22.5	300	F461DP105(1)400(2)
400	220	1.2	DP	11	20	26	22.5	300	F461DP125(1)400(2)
400	220	1.5	DU	13	22	26	22.5	300	F461DU155(1)400(2)
400	220	1.8	DY	15.5	24.5	26	22.5	300	F461DY185(1)400(2)
400	220	2.2	DY	15.5	24.5	26	22.5	300	F461DY225(3)400(2)
400	220	0.56	FB	9	17	31.5	27.5	130	F461FB564(1)400(2)
400	220	0.68	FB	9	17	31.5	27.5	130	F461FB684(1)400(2)
400	220	0.82	FB	9	17	31.5	27.5	130	F461FB824(1)400(2)
400	220	1	FC	11	20	31.5	27.5	130	F461FC105(1)400(2)
400	220	1.2	FC	11	20	31.5	27.5	130	F461FC125(1)400(2)
400	220	1.5	FC	11	20	31.5	27.5	130	F461FC155(1)400(2)
400	220	1.8	FI	13	25	31.5	27.5	130	F461FI185(1)400(2)
400	220	2.2	FI	13	25	31.5	27.5	130	F461FI225(1)400(2)
400	220	2.7	FN	14	28	31.5	27.5	130	F461FN275(1)400(2)
400	220	3.3	FR	17.5	28	31.5	27.5	130	F461FR335(1)400(2)
400	220	3.9	FS	19	29	31.5	27.5	130	F461FS395(1)400(2)
400	220	4.7	FY	22	37	31.5	27.5	130	F461FY475(1)400(2)
400	220	5.6	FY	22	37	31.5	27.5	130	F461FY565(1)400(2)
400	220	6.8	FY	22	37	31.5	27.5	130	F461FY685(1)400(2)
400	220	1.5	RB	11	22	41	37.5	70	F461RB155(1)400(2)
400	220	1.8	RB	11	22	41	37.5	70	F461RB185(1)400(2)
400	220	2.2	RB	11	22	41	37.5	70	F461RB225(1)400(2)
400	220	2.7	RF	13	24	41	37.5	70	F461RF275(1)400(2)
400	220	3.3	RF	13	24	41	37.5	70	F461RF335(1)400(2)
400	220	3.9	RH	15	26	41	37.5	70	F461RH395(1)400(2)
400	220	4.7	RC	16	28.5	41	37.5	70	F461RC475(1)400(2)
400	220	5.6	RD	19	32	41	37.5	70	F461RD565(1)400(2)
400	220	6.8	RD	19	32	41	37.5	70	F461RD685(1)400(2)
400	220	8.2	RP	21	38	41	37.5	70	F461RP825(1)400(2)
400	220	10	RO	24	44	41	37.5	70	F461RO106(1)400(2)
400	220	12	RO	24	44	41	37.5	70	F461RO126(1)400(2)
400	220	15	RU	30	45	41	37.5	70	F461RU156(1)400(2)
400	220	18	RU	30	45	41	37.5	70	F461RU186(1)400(2)
630	250	0.0015	JF	2.5	6.5	7.2	5	500	F461JF152(1)630(2)
630	250	0.0018	JF	2.5	6.5	7.2	5	500	F461JF182(1)630(2)
630	250	0.0022	JF	2.5	6.5	7.2	5	500	F461JF222(1)630(2)
630	250	0.0027	JF	2.5	6.5	7.2	5	500	F461JF272(1)630(2)
630	250	0.0033	JF	2.5	6.5	7.2	5	500	F461JF332(1)630(2)
630	250	0.0039	JG	3.5	7.5	7.2	5	500	F461JG392(1)630(2)
630	250	0.0047	JG	3.5	7.5	7.2	5	500	F461JG472(1)630(2)
630	250	0.0056	JG	3.5	7.5	7.2	5	500	F461JG562(1)630(2)
630	250	0.0068	JM	4.5	9.5	7.2	5	500	F461JM682(1)630(2)
630	250	0.0082	JM	4.5	9.5	7.2	5	500	F461JM822(1)630(2)
630	250	0.01	JM	4.5	9.5	7.2	5	500	F461JM103(1)630(2)
630	250	0.012	JQ	5	10	7.2	5	500	F461JQ123(1)630(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
630	250	0.015	JT	6	11	7.2	5	500	F461JT153(1)630(2)
630	250	0.018	JT	6	11	7.2	5	500	F461JT183(1)630(2)
630	250	0.022	JT	6	11	7.2	5	500	F461JT223(3)630(2)
630	250	0.022	JU	7.2	13	7.2	5	500	F461JU223(1)630(2)
630	250	0.027	JU	7.2	13	7.2	5	500	F461JU273(1)630(2)
630	250	0.033	JU	7.2	13	7.2	5	500	F461JU333(1)630(2)
630	250	0.0015	KE	2.5	6	10	7.5	2,400	F461KE152(1)630(2)
630	250	0.0018	KE	2.5	6	10	7.5	2,400	F461KE182(1)630(2)
630	250	0.0022	KE	2.5	6	10	7.5	2,400	F461KE222(1)630(2)
630	250	0.0027	KF	3	8	10	7.5	2,400	F461KF272(1)630(2)
630	250	0.0033	KF	3	8	10	7.5	2,400	F461KF332(1)630(2)
630	250	0.0039	KF	3	8	10	7.5	2,400	F461KF392(1)630(2)
630	250	0.0047	KF	3	8	10	7.5	2,400	F461KF472(1)630(2)
630	250	0.0056	KF	3	8	10	7.5	2,400	F461KF562(1)630(2)
630	250	0.0068	KF	3	8	10	7.5	2,400	F461KF682(1)630(2)
630	250	0.0082	KG	4	8	10	7.5	2,400	F461KG822(1)630(2)
630	250	0.01	KG	4	8	10	7.5	2,400	F461KG103(1)630(2)
630	250	0.012	KJ	5	10.5	10	7.5	2,400	F461KJ123(1)630(2)
630	250	0.015	KJ	5	10.5	10	7.5	2,400	F461KJ153(1)630(2)
630	250	0.018	KJ	5	10.5	10	7.5	2,400	F461KJ183(1)630(2)
630	250	0.022	KJ	5	10.5	10	7.5	2,400	F461KJ223(1)630(2)
630	250	0.027	KM	6	12	10.5	7.5	2,400	F461KM273(1)630(2)
630	250	0.033	KM	6	12	10.5	7.5	2,400	F461KM333(1)630(2)
630	250	0.039	KM	6	12	10.5	7.5	2,400	F461KM393(1)630(2)
630	250	0.01	AG	4	9	13	10	2,000	F461AG103(1)630(2)
630	250	0.012	AG	4	9	13	10	2,000	F461AG123(1)630(2)
630	250	0.015	AG	4	9	13	10	2,000	F461AG153(1)630(2)
630	250	0.018	AG	4	9	13	10	2,000	F461AG183(1)630(2)
630	250	0.022	AG	4	9	13	10	2,000	F461AG223(1)630(2)
630	250	0.027	AK	5	11	13	10	2,000	F461AK273(1)630(2)
630	250	0.033	AK	5	11	13	10	2,000	F461AK333(1)630(2)
630	250	0.039	AK	5	11	13	10	2,000	F461AK393(1)630(2)
630	250	0.047	AP	6	12	13	10	2,000	F461AP473(1)630(2)
630	250	0.056	AP	6	12	13	10	2,000	F461AP563(1)630(2)
630	250	0.068	AP	6	12	13	10	2,000	F461AP683(1)630(2)
630	250	0.022	BB	4	10	18	15	1,000	F461BB223(1)630(2)
630	250	0.027	BB	4	10	18	15	1,000	F461BB273(1)630(2)
630	250	0.033	BB	4	10	18	15	1,000	F461BB333(1)630(2)
630	250	0.039	BB	4	10	18	15	1,000	F461BB393(1)630(2)
630	250	0.047	BC	5	11	18	15	1,000	F461BC473(1)630(2)
630	250	0.056	BC	5	11	18	15	1,000	F461BC563(1)630(2)
630	250	0.063	BC	5	11	18	15	1,000	F461BC633(1)630(2)
630	250	0.068	BE	5.5	12.5	18	15	1,000	F461BE683(1)630(2)
630	250	0.082	BE	5.5	12.5	18	15	1,000	F461BE823(1)630(2)
630	250	0.1	BK	7.5	13.5	18	15	1,000	F461BK104(1)630(2)
630	250	0.12	BK	7.5	13.5	18	15	1,000	F461BK124(1)630(2)
630	250	0.15	BK	7.5	13.5	18	15	1,000	F461BK154(1)630(2)
630	250	0.18	BP	8.5	14.5	18	15	1,000	F461BP184(1)630(2)
630	250	0.22	BS	10	16	18	15	1,000	F461BS224(1)630(2)
630	250	0.27	BY	11	19	18	15	1,000	F461BY274(1)630(2)
630	250	0.33	BY	11	19	18	15	1,000	F461BY334(1)630(2)
630	250	0.39	BY	11	19	18	15	1,000	F461BY394(1)630(2)
630	250	0.1	DB	6	14.5	26	22.5	400	F461DB104(1)630(2)
630	250	0.12	DB	6	14.5	26	22.5	400	F461DB124(1)630(2)
630	250	0.15	DB	6	14.5	26	22.5	400	F461DB154(1)630(2)
630	250	0.18	DI	7	16	26	22.5	400	F461DI184(1)630(2)
630	250	0.22	DI	7	16	26	22.5	400	F461DI224(1)630(2)
630	250	0.27	DH	8	16	26	22.5	400	F461DH274(1)630(2)
630	250	0.33	DJ	8.5	17	26	22.5	400	F461DJ334(1)630(2)
630	250	0.39	DM	9	18.5	26	22.5	400	F461DM394(1)630(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
630	250	0.47	DM	9	18.5	26	22.5	400	F461DM474(1)630(2)
630	250	0.56	DP	11	20	26	22.5	400	F461DP564(1)630(2)
630	250	0.68	DU	13	22	26	22.5	400	F461DU684(1)630(2)
630	250	0.82	DU	13	22	26	22.5	400	F461DU824(1)630(2)
630	250	1	DY	15.5	24.5	26	22.5	400	F461DY105(1)630(2)
630	250	1.2	DY	15.5	24.5	26	22.5	400	F461DY125(1)630(2)
630	250	0.33	FB	9	17	31.5	27.5	180	F461FB334(1)630(2)
630	250	0.39	FB	9	17	31.5	27.5	180	F461FB394(1)630(2)
630	250	0.47	FB	9	17	31.5	27.5	180	F461FB474(1)630(2)
630	250	0.56	FC	11	20	31.5	27.5	180	F461FC564(1)630(2)
630	250	0.68	FC	11	20	31.5	27.5	180	F461FC684(1)630(2)
630	250	0.82	FC	11	20	31.5	27.5	180	F461FC824(1)630(2)
630	250	1	FI	13	25	31.5	27.5	180	F461FI105(1)630(2)
630	250	1.2	FI	13	25	31.5	27.5	180	F461FI125(1)630(2)
630	250	1.5	FN	14	28	31.5	27.5	180	F461FN155(1)630(2)
630	250	1.8	FR	17.5	28	31.5	27.5	180	F461FR185(1)630(2)
630	250	2.2	FS	19	29	31.5	27.5	180	F461FS225(1)630(2)
630	250	2.7	FY	22	37	31.5	27.5	180	F461FY275(1)630(2)
630	250	3.3	FY	22	37	31.5	27.5	180	F461FY335(1)630(2)
630	250	3.9	FY	22	37	31.5	27.5	180	F461FY395(1)630(2)
630	250	0.68	RB	11	22	41	37.5	90	F461RB684(1)630(2)
630	250	0.82	RB	11	22	41	37.5	90	F461RB824(1)630(2)
630	250	1	RB	11	22	41	37.5	90	F461RB105(1)630(2)
630	250	1.2	RB	11	22	41	37.5	90	F461RB125(1)630(2)
630	250	1.5	RF	13	24	41	37.5	90	F461RF155(1)630(2)
630	250	1.8	RF	13	24	41	37.5	90	F461RF185(1)630(2)
630	250	2.2	RH	15	26	41	37.5	90	F461RH225(1)630(2)
630	250	2.7	RC	16	28.5	41	37.5	90	F461RC275(1)630(2)
630	250	3.3	RD	19	32	41	37.5	90	F461RD335(1)630(2)
630	250	3.9	RP	21	38	41	37.5	90	F461RP395(1)630(2)
630	250	4.7	RP	21	38	41	37.5	90	F461RP475(1)630(2)
630	250	5.6	RO	24	44	41	37.5	90	F461RO565(1)630(2)
630	250	6.8	RO	24	44	41	37.5	90	F461RO685(1)630(2)
630	250	8.2	RU	30	45	41	37.5	90	F461RU825(1)630(2)
1000	300	0.0047	AG	4	9	13	10	2,000	F462AG472(1)1K0(2)
1000	300	0.0056	AG	4	9	13	10	2,000	F462AG562(1)1K0(2)
1000	300	0.0068	AG	4	9	13	10	2,000	F462AG682(1)1K0(2)
1000	300	0.0082	AK	5	11	13	10	2,000	F462AK822(1)1K0(2)
1000	300	0.01	AK	5	11	13	10	2,000	F462AK103(1)1K0(2)
1000	300	0.012	AK	5	11	13	10	2,000	F462AK123(1)1K0(2)
1000	300	0.015	AP	6	12	13	10	2,000	F462AP153(1)1K0(2)
1000	300	0.018	AP	6	12	13	10	2,000	F462AP183(1)1K0(2)
1000	300	0.022	AP	6	12	13	10	2,000	F462AP223(1)1K0(2)
1000	300	0.01	BB	4	10	18	15	1,600	F462BB103(1)1K0(2)
1000	300	0.012	BB	4	10	18	15	1,600	F462BB123(1)1K0(2)
1000	300	0.015	BB	4	10	18	15	1,600	F462BB153(1)1K0(2)
1000	300	0.018	BC	5	11	18	15	1,600	F462BC183(1)1K0(2)
1000	300	0.022	BC	5	11	18	15	1,600	F462BC223(1)1K0(2)
1000	300	0.027	BE	5.5	12.5	18	15	1,600	F462BE273(1)1K0(2)
1000	300	0.033	BE	5.5	12.5	18	15	1,600	F462BE333(1)1K0(2)
1000	300	0.039	BK	7.5	13.5	18	15	1,600	F462BK393(1)1K0(2)
1000	300	0.047	BK	7.5	13.5	18	15	1,600	F462BK473(1)1K0(2)
1000	300	0.056	BK	7.5	13.5	18	15	1,600	F462BK563(1)1K0(2)
1000	300	0.068	BP	8.5	14.5	18	15	1,600	F462BP683(1)1K0(2)
1000	300	0.082	BS	10	16	18	15	1,600	F462BS823(1)1K0(2)
1000	300	0.1	BS	10	16	18	15	1,600	F462BS104(1)1K0(2)
1000	300	0.12	BY	11	19	18	15	1,600	F462BY124(1)1K0(2)
1000	300	0.15	BY	11	19	18	15	1,600	F462BY154(1)1K0(2)
1000	300	0.047	DB	6	14.5	26	22.5	600	F462DB473(1)1K0(2)
1000	300	0.056	DB	6	14.5	26	22.5	600	F462DB563(1)1K0(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
1000	300	0.068	DB	6	14.5	26	22.5	600	F462DB683(1)1K0(2)
1000	300	0.082	DI	7	16	26	22.5	600	F462DI823(1)1K0(2)
1000	300	0.1	DI	7	16	26	22.5	600	F462DI104(1)1K0(2)
1000	300	0.12	DH	8	16	26	22.5	600	F462DH124(1)1K0(2)
1000	300	0.15	DM	9	18.5	26	22.5	600	F462DM154(1)1K0(2)
1000	300	0.18	DO	10	18.5	26	22.5	600	F462DO184(1)1K0(2)
1000	300	0.22	DO	10	18.5	26	22.5	600	F462DO224(1)1K0(2)
1000	300	0.27	DU	13	22	26	22.5	600	F462DU274(1)1K0(2)
1000	300	0.33	DU	13	22	26	22.5	600	F462DU334(1)1K0(2)
1000	300	0.39	DY	15.5	24.5	26	22.5	600	F462DY394(1)1K0(2)
1000	300	0.47	DY	15.5	24.5	26	22.5	600	F462DY474(1)1K0(2)
1000	300	0.56	DY	15.5	24.5	26	22.5	600	F462DY564(1)1K0(2)
1000	300	0.15	FB	9	17	31.5	27.5	200	F462FB154(1)1K0(2)
1000	300	0.18	FB	9	17	31.5	27.5	200	F462FB184(1)1K0(2)
1000	300	0.22	FB	9	17	31.5	27.5	200	F462FB224(1)1K0(2)
1000	300	0.27	FC	11	20	31.5	27.5	200	F462FC274(1)1K0(2)
1000	300	0.33	FC	11	20	31.5	27.5	200	F462FC334(1)1K0(2)
1000	300	0.39	FI	13	25	31.5	27.5	200	F462FI394(1)1K0(2)
1000	300	0.47	FI	13	25	31.5	27.5	200	F462FI474(1)1K0(2)
1000	300	0.56	FN	14	28	31.5	27.5	200	F462FN564(1)1K0(2)
1000	300	0.68	FN	14	28	31.5	27.5	200	F462FN684(1)1K0(2)
1000	300	0.82	FR	17.5	28	31.5	27.5	200	F462FR824(1)1K0(2)
1000	300	1	FY	22	37	31.5	27.5	200	F462FY105(1)1K0(2)
1000	300	1.2	FY	22	37	31.5	27.5	200	F462FY125(1)1K0(2)
1000	300	1.5	FY	22	37	31.5	27.5	200	F462FY155(1)1K0(2)
1000	300	0.33	RB	11	22	41	37.5	150	F462RB334(1)1K0(2)
1000	300	0.39	RB	11	22	41	37.5	150	F462RB394(1)1K0(2)
1000	300	0.47	RB	11	22	41	37.5	150	F462RB474(1)1K0(2)
1000	300	0.56	RB	11	22	41	37.5	150	F462RB564(1)1K0(2)
1000	300	0.68	RF	13	24	41	37.5	150	F462RF684(1)1K0(2)
1000	300	0.82	RH	15	26	41	37.5	150	F462RH824(1)1K0(2)
1000	300	1	RC	16	28.5	41	37.5	150	F462RC105(1)1K0(2)
1000	300	1.2	RD	19	32	41	37.5	150	F462RD125(1)1K0(2)
1000	300	1.5	RD	19	32	41	37.5	150	F462RD155(1)1K0(2)
1000	300	1.8	RP	21	38	41	37.5	150	F462RP185(1)1K0(2)
1000	300	2.2	RP	21	38	41	37.5	150	F462RP225(1)1K0(2)
1000	300	2.7	RO	24	44	41	37.5	150	F462RO275(1)1K0(2)
1000	300	3.3	RU	30	45	41	37.5	150	F462RU335(1)1K0(2)
1000	300	3.9	RU	30	45	41	37.5	150	F462RU395(1)1K0(2)
1250	400	0.0033	AG	4	9	13	10	2,200	F462AG332(1)1L2(2)
1250	400	0.0047	AG	4	9	13	10	2,200	F462AG472(1)1L2(2)
1250	400	0.0056	AG	4	9	13	10	2,200	F462AG562(1)1L2(2)
1250	400	0.0068	AK	5	11	13	10	2,200	F462AK682(1)1L2(2)
1250	400	0.0082	AK	5	11	13	10	2,200	F462AK822(1)1L2(2)
1250	400	0.01	AK	5	11	13	10	2,200	F462AK103(1)1L2(2)
1250	400	0.012	AK	5	11	13	10	2,200	F462AK123(1)1L2(2)
1250	400	0.015	AP	6	12	13	10	2,200	F462AP153(1)1L2(2)
1250	400	0.0068	BB	4	10	18	15	2,000	F462BB682(1)1L2(2)
1250	400	0.0082	BB	4	10	18	15	2,000	F462BB822(1)1L2(2)
1250	400	0.01	BB	4	10	18	15	2,000	F462BB103(1)1L2(2)
1250	400	0.012	BC	5	11	18	15	2,000	F462BC123(1)1L2(2)
1250	400	0.015	BC	5	11	18	15	2,000	F462BC153(1)1L2(2)
1250	400	0.018	BE	5.5	12.5	18	15	2,000	F462BE183(1)1L2(2)
1250	400	0.022	BE	5.5	12.5	18	15	2,000	F462BE223(1)1L2(2)
1250	400	0.027	BK	7.5	13.5	18	15	2,000	F462BK273(1)1L2(2)
1250	400	0.033	BK	7.5	13.5	18	15	2,000	F462BK333(1)1L2(2)
1250	400	0.039	BK	7.5	13.5	18	15	2,000	F462BK393(1)1L2(2)
1250	400	0.047	BK	7.5	13.5	18	15	2,000	F462BK473(1)1L2(2)
1250	400	0.056	BP	8.5	14.5	18	15	2,000	F462BP563(1)1L2(2)
1250	400	0.068	BS	10	16	18	15	2,000	F462BS683(1)1L2(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
1250	400	0.082	BY	11	19	18	15	2,000	F462BY823(1)1L2(2)
1250	400	0.1	BY	11	19	18	15	2,000	F462BY104(1)1L2(2)
1250	400	0.12	BY	11	19	18	15	2,000	F462BY124(1)1L2(2)
1250	400	0.033	DB	6	14.5	26	22.5	800	F462DB333(1)1L2(2)
1250	400	0.039	DB	6	14.5	26	22.5	800	F462DB393(1)1L2(2)
1250	400	0.047	DB	6	14.5	26	22.5	800	F462DB473(1)1L2(2)
1250	400	0.056	DB	6	14.5	26	22.5	800	F462DB563(1)1L2(2)
1250	400	0.068	DI	7	16	26	22.5	800	F462DI683(1)1L2(2)
1250	400	0.082	DI	7	16	26	22.5	800	F462DI823(1)1L2(2)
1250	400	0.1	DJ	8.5	17	26	22.5	800	F462DJ104(1)1L2(2)
1250	400	0.12	DM	9	18.5	26	22.5	800	F462DM124(1)1L2(2)
1250	400	0.15	DM	9	18.5	26	22.5	800	F462DM154(1)1L2(2)
1250	400	0.18	DP	11	20	26	22.5	800	F462DP184(1)1L2(2)
1250	400	0.22	DU	13	22	26	22.5	800	F462DU224(1)1L2(2)
1250	400	0.27	DY	15.5	24.5	26	22.5	800	F462DY274(1)1L2(2)
1250	400	0.33	DY	15.5	24.5	26	22.5	800	F462DY334(1)1L2(2)
1250	400	0.39	DY	15.5	24.5	26	22.5	800	F462DY394(1)1L2(2)
1250	400	0.1	FB	9	17	31.5	27.5	380	F462FB104(1)1L2(2)
1250	400	0.12	FB	9	17	31.5	27.5	380	F462FB124(1)1L2(2)
1250	400	0.15	FB	9	17	31.5	27.5	380	F462FB154(1)1L2(2)
1250	400	0.18	FC	11	20	31.5	27.5	380	F462FC184(1)1L2(2)
1250	400	0.22	FC	11	20	31.5	27.5	380	F462FC224(1)1L2(2)
1250	400	0.27	FI	13	25	31.5	27.5	380	F462FI274(1)1L2(2)
1250	400	0.33	FI	13	25	31.5	27.5	380	F462FI334(1)1L2(2)
1250	400	0.39	FI	13	25	31.5	27.5	380	F462FI394(1)1L2(2)
1250	400	0.47	FN	14	28	31.5	27.5	380	F462FN474(1)1L2(2)
1250	400	0.56	FR	17.5	28	31.5	27.5	380	F462FR564(1)1L2(2)
1250	400	0.68	FS	19	29	31.5	27.5	380	F462FS684(1)1L2(2)
1250	400	0.82	FY	22	37	31.5	27.5	380	F462FY824(1)1L2(2)
1250	400	1	FY	22	37	31.5	27.5	380	F462FY105(1)1L2(2)
1250	400	1.2	FY	22	37	31.5	27.5	380	F462FY125(1)1L2(2)
1250	400	0.22	RB	11	22	41	37.5	180	F462RB224(1)1L2(2)
1250	400	0.27	RB	11	22	41	37.5	180	F462RB274(1)1L2(2)
1250	400	0.33	RB	11	22	41	37.5	180	F462RB334(1)1L2(2)
1250	400	0.39	RB	11	22	41	37.5	180	F462RB394(1)1L2(2)
1250	400	0.47	RF	13	24	41	37.5	180	F462RF474(1)1L2(2)
1250	400	0.56	RF	13	24	41	37.5	180	F462RF564(1)1L2(2)
1250	400	0.68	RH	15	26	41	37.5	180	F462RH684(1)1L2(2)
1250	400	0.82	RC	16	28.5	41	37.5	180	F462RC824(1)1L2(2)
1250	400	1	RD	19	32	41	37.5	180	F462RD105(1)1L2(2)
1250	400	1.2	RP	21	38	41	37.5	180	F462RP125(1)1L2(2)
1250	400	1.5	RP	21	38	41	37.5	180	F462RP155(1)1L2(2)
1250	400	1.8	RO	24	44	41	37.5	180	F462RO185(1)1L2(2)
1250	400	2.2	RU	30	45	41	37.5	180	F462RU225(1)1L2(2)
1250	400	2.7	RU	30	45	41	37.5	180	F462RU275(1)1L2(2)
1250	500	0.0047	BB	4	10	18	15	3,500	F463BB472(1)1L2(2)
1250	500	0.0056	BB	4	10	18	15	3,500	F463BB562(1)1L2(2)
1250	500	0.0068	BB	4	10	18	15	3,500	F463BB682(1)1L2(2)
1250	500	0.0082	BC	5	11	18	15	3,500	F463BC822(1)1L2(2)
1250	500	0.01	BC	5	11	18	15	3,500	F463BC103(1)1L2(2)
1250	500	0.012	BE	5.5	12.5	18	15	3,500	F463BE123(1)1L2(2)
1250	500	0.015	BG	6	12	18	15	3,500	F463BG153(1)1L2(2)
1250	500	0.018	BK	7.5	13.5	18	15	3,500	F463BK183(1)1L2(2)
1250	500	0.022	BK	7.5	13.5	18	15	3,500	F463BK223(1)1L2(2)
1250	500	0.027	BK	7.5	13.5	18	15	3,500	F463BK273(1)1L2(2)
1250	500	0.033	BP	8.5	14.5	18	15	3,500	F463BP333(1)1L2(2)
1250	500	0.039	BS	10	16	18	15	3,500	F463BS393(1)1L2(2)
1250	500	0.047	BS	10	16	18	15	3,500	F463BS473(1)1L2(2)
1250	500	0.056	BY	11	19	18	15	3,500	F463BY563(1)1L2(2)
1250	500	0.068	BY	11	19	18	15	3,500	F463BY683(1)1L2(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
1250	500	0.022	DB	6	14.5	26	22.5	2,000	F463DB223(1)1L2(2)
1250	500	0.027	DB	6	14.5	26	22.5	2,000	F463DB273(1)1L2(2)
1250	500	0.033	DB	6	14.5	26	22.5	2,000	F463DB333(1)1L2(2)
1250	500	0.039	DB	6	14.5	26	22.5	2,000	F463DB393(1)1L2(2)
1250	500	0.047	DI	7	16	26	22.5	2,000	F463DI473(1)1L2(2)
1250	500	0.056	DI	7	16	26	22.5	2,000	F463DI563(1)1L2(2)
1250	500	0.068	DJ	8.5	17	26	22.5	2,000	F463DJ683(1)1L2(2)
1250	500	0.082	DM	9	18.5	26	22.5	2,000	F463DM823(1)1L2(2)
1250	500	0.1	DO	10	18.5	26	22.5	2,000	F463DO104(1)1L2(2)
1250	500	0.12	DP	11	20	26	22.5	2,000	F463DP124(1)1L2(2)
1250	500	0.15	DU	13	22	26	22.5	2,000	F463DU154(1)1L2(2)
1250	500	0.18	DU	13	22	26	22.5	2,000	F463DU184(1)1L2(2)
1250	500	0.22	DY	15.5	24.5	26	22.5	2,000	F463DY224(1)1L2(2)
1250	500	0.27	DY	15.5	24.5	26	22.5	2,000	F463DY274(1)1L2(2)
1250	500	0.068	FB	9	17	31.5	27.5	800	F463FB683(1)1L2(2)
1250	500	0.082	FB	9	17	31.5	27.5	800	F463FB823(1)1L2(2)
1250	500	0.1	FB	9	17	31.5	27.5	800	F463FB104(1)1L2(2)
1250	500	0.12	FB	9	17	31.5	27.5	800	F463FB124(1)1L2(2)
1250	500	0.15	FC	11	20	31.5	27.5	800	F463FC154(1)1L2(2)
1250	500	0.18	FC	11	20	31.5	27.5	800	F463FC184(1)1L2(2)
1250	500	0.22	FI	13	25	31.5	27.5	800	F463FI224(1)1L2(2)
1250	500	0.27	FI	13	25	31.5	27.5	800	F463FI274(1)1L2(2)
1250	500	0.33	FN	14	28	31.5	27.5	800	F463FN334(1)1L2(2)
1250	500	0.39	FR	17.5	28	31.5	27.5	800	F463FR394(1)1L2(2)
1250	500	0.47	FR	17.5	28	31.5	27.5	800	F463FR474(3)1L2(2)
1250	500	0.47	FS	19	29	31.5	27.5	800	F463FS474(1)1L2(2)
1250	500	0.56	FY	22	37	31.5	27.5	800	F463FY564(1)1L2(2)
1250	500	0.68	FY	22	37	31.5	27.5	800	F463FY684(1)1L2(2)
1250	500	0.82	FY	22	37	31.5	27.5	800	F463FY824(1)1L2(2)
1250	500	0.22	RB	11	22	41	37.5	400	F463RB224(1)1L2(2)
1250	500	0.27	RB	11	22	41	37.5	400	F463RB274(1)1L2(2)
1250	500	0.33	RB	11	22	41	37.5	400	F463RB334(1)1L2(2)
1250	500	0.39	RF	13	24	41	37.5	400	F463RF394(1)1L2(2)
1250	500	0.47	RH	15	26	41	37.5	400	F463RH474(1)1L2(2)
1250	500	0.56	RC	16	28.5	41	37.5	400	F463RC564(1)1L2(2)
1250	500	0.68	RC	16	28.5	41	37.5	400	F463RC684(1)1L2(2)
1250	500	0.82	RD	19	32	41	37.5	400	F463RD824(1)1L2(2)
1250	500	1	RP	21	38	41	37.5	400	F463RP105(1)1L2(2)
1250	500	1.2	RP	21	38	41	37.5	400	F463RP125(1)1L2(2)
1250	500	1.5	RO	24	44	41	37.5	400	F463RO155(1)1L2(2)
1250	500	1.8	RU	30	45	41	37.5	400	F463RU185(1)1L2(2)
1250	500	2.2	RU	30	45	41	37.5	400	F463RU225(1)1L2(2)
1600	500	0.001	AG	4	9	13	10	6,000	F462AG102(1)1K6(2)
1600	500	0.0012	AG	4	9	13	10	6,000	F462AG122(1)1K6(2)
1600	500	0.0015	AG	4	9	13	10	6,000	F462AG152(1)1K6(2)
1600	500	0.0018	AG	4	9	13	10	6,000	F462AG182(1)1K6(2)
1600	500	0.0022	AG	4	9	13	10	6,000	F462AG222(1)1K6(2)
1600	500	0.0027	AK	5	11	13	10	6,000	F462AK272(1)1K6(2)
1600	500	0.0033	AK	5	11	13	10	6,000	F462AK332(1)1K6(2)
1600	500	0.0039	AK	5	11	13	10	6,000	F462AK392(1)1K6(2)
1600	500	0.0047	AK	5	11	13	10	6,000	F462AK472(1)1K6(2)
1600	500	0.0056	AP	6	12	13	10	6,000	F462AP562(1)1K6(2)
1600	500	0.0068	AP	6	12	13	10	6,000	F462AP682(1)1K6(2)
1600	500	0.0033	BB	4	10	18	15	4,500	F462BB332(1)1K6(2)
1600	500	0.0039	BB	4	10	18	15	4,500	F462BB392(1)1K6(2)
1600	500	0.0047	BB	4	10	18	15	4,500	F462BB472(1)1K6(2)
1600	500	0.0056	BB	4	10	18	15	4,500	F462BB562(1)1K6(2)
1600	500	0.0068	BC	5	11	18	15	4,500	F462BC682(1)1K6(2)
1600	500	0.0082	BC	5	11	18	15	4,500	F462BC822(1)1K6(2)
1600	500	0.01	BE	5.5	12.5	18	15	4,500	F462BE103(1)1K6(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
1600	500	0.012	BG	6	12	18	15	4,500	F462BG123(1)1K6(2)
1600	500	0.015	BK	7.5	13.5	18	15	4,500	F462BK153(1)1K6(2)
1600	500	0.018	BK	7.5	13.5	18	15	4,500	F462BK183(1)1K6(2)
1600	500	0.022	BK	7.5	13.5	18	15	4,500	F462BK223(1)1K6(2)
1600	500	0.027	BP	8.5	14.5	18	15	4,500	F462BP273(1)1K6(2)
1600	500	0.033	BS	10	16	18	15	4,500	F462BS333(1)1K6(2)
1600	500	0.039	BY	11	19	18	15	4,500	F462BY393(1)1K6(2)
1600	500	0.047	BY	11	19	18	15	4,500	F462BY473(1)1K6(2)
1600	500	0.056	BY	11	19	18	15	4,500	F462BY563(1)1K6(2)
1600	500	0.015	DB	6	14.5	26	22.5	1,800	F462DB153(1)1K6(2)
1600	500	0.018	DB	6	14.5	26	22.5	1,800	F462DB183(1)1K6(2)
1600	500	0.022	DB	6	14.5	26	22.5	1,800	F462DB223(1)1K6(2)
1600	500	0.027	DB	6	14.5	26	22.5	1,800	F462DB273(1)1K6(2)
1600	500	0.033	DI	7	16	26	22.5	1,800	F462DI333(1)1K6(2)
1600	500	0.039	DI	7	16	26	22.5	1,800	F462DI393(1)1K6(2)
1600	500	0.047	DH	8	16	26	22.5	1,800	F462DH473(1)1K6(2)
1600	500	0.056	DM	9	18.5	26	22.5	1,800	F462DM563(1)1K6(2)
1600	500	0.068	DO	10	18.5	26	22.5	1,800	F462DO683(1)1K6(2)
1600	500	0.082	DP	11	20	26	22.5	1,800	F462DP823(1)1K6(2)
1600	500	0.1	DP	11	20	26	22.5	1,800	F462DP104(1)1K6(2)
1600	500	0.12	DU	13	22	26	22.5	1,800	F462DU124(1)1K6(2)
1600	500	0.15	DY	15.5	24.5	26	22.5	1,800	F462DY154(1)1K6(2)
1600	500	0.18	DY	15.5	24.5	26	22.5	1,800	F462DY184(1)1K6(2)
1600	500	0.22	DY	15.5	24.5	26	22.5	1,800	F462DY224(3)1K6(2)
1600	500	0.047	FB	9	17	31.5	27.5	500	F462FB473(1)1K6(2)
1600	500	0.056	FB	9	17	31.5	27.5	500	F462FB563(1)1K6(2)
1600	500	0.068	FB	9	17	31.5	27.5	500	F462FB683(1)1K6(2)
1600	500	0.082	FB	9	17	31.5	27.5	500	F462FB823(1)1K6(2)
1600	500	0.1	FC	11	20	31.5	27.5	500	F462FC104(1)1K6(2)
1600	500	0.12	FC	11	20	31.5	27.5	500	F462FC124(1)1K6(2)
1600	500	0.15	FI	13	25	31.5	27.5	500	F462FI154(1)1K6(2)
1600	500	0.18	FI	13	25	31.5	27.5	500	F462FI184(1)1K6(2)
1600	500	0.22	FN	14	28	31.5	27.5	500	F462FN224(1)1K6(2)
1600	500	0.27	FR	17.5	28	31.5	27.5	500	F462FR274(1)1K6(2)
1600	500	0.33	FR	17.5	28	31.5	27.5	500	F462FR334(1)1K6(2)
1600	500	0.39	FS	19	29	31.5	27.5	500	F462FS394(1)1K6(2)
1600	500	0.47	FY	22	37	31.5	27.5	500	F462FY474(1)1K6(2)
1600	500	0.56	FY	22	37	31.5	27.5	500	F462FY564(1)1K6(2)
1600	500	0.68	FY	22	37	31.5	27.5	500	F462FY684(1)1K6(2)
1600	500	0.15	RB	11	22	41	37.5	300	F462RB154(1)1K6(2)
1600	500	0.18	RB	11	22	41	37.5	300	F462RB184(1)1K6(2)
1600	500	0.22	RB	11	22	41	37.5	300	F462RB224(1)1K6(2)
1600	500	0.27	RF	13	24	41	37.5	300	F462RF274(1)1K6(2)
1600	500	0.33	RH	15	26	41	37.5	300	F462RH334(1)1K6(2)
1600	500	0.39	RC	16	28.5	41	37.5	300	F462RC394(1)1K6(2)
1600	500	0.47	RC	16	28.5	41	37.5	300	F462RC474(1)1K6(2)
1600	500	0.56	RD	19	32	41	37.5	300	F462RD564(1)1K6(2)
1600	500	0.68	RP	21	38	41	37.5	300	F462RP684(1)1K6(2)
1600	500	0.82	RP	21	38	41	37.5	300	F462RP824(1)1K6(2)
1600	500	1	RO	24	44	41	37.5	300	F462RO105(1)1K6(2)
1600	500	1.2	RO	24	44	41	37.5	300	F462RO125(1)1K6(2)
1600	500	1.5	RU	30	45	41	37.5	300	F462RU155(1)1K6(2)
1600	650	0.0033	BB	4	10	18	15	6,000	F463BB332(1)1K6(2)
1600	650	0.0039	BB	4	10	18	15	6,000	F463BB392(1)1K6(2)
1600	650	0.0047	BB	4	10	18	15	6,000	F463BB472(1)1K6(2)
1600	650	0.0056	BC	5	11	18	15	6,000	F463BC562(1)1K6(2)
1600	650	0.0068	BC	5	11	18	15	6,000	F463BC682(1)1K6(2)
1600	650	0.0082	BE	5.5	12.5	18	15	6,000	F463BE822(1)1K6(2)
1600	650	0.01	BG	6	12	18	15	6,000	F463BG103(1)1K6(2)
1600	650	0.012	BK	7.5	13.5	18	15	6,000	F463BK123(1)1K6(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
1600	650	0.015	BK	7.5	13.5	18	15	6,000	F463BK153(1)1K6(2)
1600	650	0.018	BP	8.5	14.5	18	15	6,000	F463BP183(1)1K6(2)
1600	650	0.022	BP	8.5	14.5	18	15	6,000	F463BP223(1)1K6(2)
1600	650	0.027	BS	10	16	18	15	6,000	F463BS273(1)1K6(2)
1600	650	0.033	BY	11	19	18	15	6,000	F463BY333(1)1K6(2)
1600	650	0.039	BY	11	19	18	15	6,000	F463BY393(1)1K6(2)
1600	650	0.047	BY	11	19	18	15	6,000	F463BY473(1)1K6(2)
1600	650	0.015	DB	6	14.5	26	22.5	3,000	F463DB153(1)1K6(2)
1600	650	0.018	DB	6	14.5	26	22.5	3,000	F463DB183(1)1K6(2)
1600	650	0.022	DB	6	14.5	26	22.5	3,000	F463DB223(1)1K6(2)
1600	650	0.027	DB	6	14.5	26	22.5	3,000	F463DB273(1)1K6(2)
1600	650	0.033	DI	7	16	26	22.5	3,000	F463DI333(1)1K6(2)
1600	650	0.039	DI	7	16	26	22.5	3,000	F463DI393(1)1K6(2)
1600	650	0.047	DJ	8.5	17	26	22.5	3,000	F463DJ473(1)1K6(2)
1600	650	0.056	DM	9	18.5	26	22.5	3,000	F463DM563(1)1K6(2)
1600	650	0.068	DO	10	18.5	26	22.5	3,000	F463DO683(1)1K6(2)
1600	650	0.082	DP	11	20	26	22.5	3,000	F463DP823(1)1K6(2)
1600	650	0.1	DU	13	22	26	22.5	3,000	F463DU104(1)1K6(2)
1600	650	0.12	DU	13	22	26	22.5	3,000	F463DU124(1)1K6(2)
1600	650	0.15	DY	15.5	24.5	26	22.5	3,000	F463DY154(1)1K6(2)
1600	650	0.18	DY	15.5	24.5	26	22.5	3,000	F463DY184(1)1K6(2)
1600	650	0.047	FB	9	17	31.5	27.5	1,500	F463FB473(1)1K6(2)
1600	650	0.056	FB	9	17	31.5	27.5	1,500	F463FB563(1)1K6(2)
1600	650	0.068	FB	9	17	31.5	27.5	1,500	F463FB683(1)1K6(2)
1600	650	0.082	FB	9	17	31.5	27.5	1,500	F463FB823(1)1K6(2)
1600	650	0.1	FC	11	20	31.5	27.5	1,500	F463FC104(1)1K6(2)
1600	650	0.12	FC	11	20	31.5	27.5	1,500	F463FC124(1)1K6(2)
1600	650	0.15	FI	13	25	31.5	27.5	1,500	F463FI154(1)1K6(2)
1600	650	0.18	FI	13	25	31.5	27.5	1,500	F463FI184(1)1K6(2)
1600	650	0.22	FN	14	28	31.5	27.5	1,500	F463FN224(1)1K6(2)
1600	650	0.27	FR	17.5	28	31.5	27.5	1,500	F463FR274(1)1K6(2)
1600	650	0.33	FS	19	29	31.5	27.5	1,500	F463FS334(1)1K6(2)
1600	650	0.39	FY	22	37	31.5	27.5	1,500	F463FY394(1)1K6(2)
1600	650	0.47	FY	22	37	31.5	27.5	1,500	F463FY474(1)1K6(2)
1600	650	0.56	FY	22	37	31.5	27.5	1,500	F463FY564(1)1K6(2)
1600	650	0.15	RB	11	22	41	37.5	750	F463RB154(1)1K6(2)
1600	650	0.18	RB	11	22	41	37.5	750	F463RB184(1)1K6(2)
1600	650	0.22	RB	11	22	41	37.5	750	F463RB224(1)1K6(2)
1600	650	0.27	RF	13	24	41	37.5	750	F463RF274(1)1K6(2)
1600	650	0.33	RH	15	26	41	37.5	750	F463RH334(1)1K6(2)
1600	650	0.39	RC	16	28.5	41	37.5	750	F463RC394(1)1K6(2)
1600	650	0.47	RD	19	32	41	37.5	750	F463RD474(1)1K6(2)
1600	650	0.56	RD	19	32	41	37.5	750	F463RD564(1)1K6(2)
1600	650	0.68	RP	21	38	41	37.5	750	F463RP684(1)1K6(2)
1600	650	0.82	RP	21	38	41	37.5	750	F463RP824(1)1K6(2)
1600	650	1	RO	24	44	41	37.5	750	F463RO105(1)1K6(2)
1600	650	1.2	RO	24	44	41	37.5	750	F463RO125(1)1K6(2)
1600	650	1.5	RU	30	45	41	37.5	750	F463RU155(1)1K6(2)
2000	700	0.001	AG	4	9	13	10	10,000	F463AG102(1)2K0(2)
2000	700	0.0012	AG	4	9	13	10	10,000	F463AG122(1)2K0(2)
2000	700	0.0015	AG	4	9	13	10	10,000	F463AG152(1)2K0(2)
2000	700	0.0018	AG	4	9	13	10	10,000	F463AG182(1)2K0(2)
2000	700	0.0022	AK	5	11	13	10	10,000	F463AK222(1)2K0(2)
2000	700	0.0027	AK	5	11	13	10	10,000	F463AK272(1)2K0(2)
2000	700	0.0033	AK	5	11	13	10	10,000	F463AK332(1)2K0(2)
2000	700	0.0039	AP	6	12	13	10	10,000	F463AP392(1)2K0(2)
2000	700	0.0047	AP	6	12	13	10	10,000	F463AP472(1)2K0(2)
2000	700	0.0056	AP	6	12	13	10	10,000	F463AP562(1)2K0(2)
2000	700	0.001	BB	4	10	18	15	9,500	F463BB102(1)2K0(2)
2000	700	0.0012	BB	4	10	18	15	9,500	F463BB122(1)2K0(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
2000	700	0.0015	BB	4	10	18	15	9,500	F463BB152(1)2K0(2)
2000	700	0.0018	BB	4	10	18	15	9,500	F463BB182(1)2K0(2)
2000	700	0.0022	BB	4	10	18	15	9,500	F463BB222(1)2K0(2)
2000	700	0.0027	BC	5	11	18	15	9,500	F463BC272(1)2K0(2)
2000	700	0.0033	BC	5	11	18	15	9,500	F463BC332(1)2K0(2)
2000	700	0.0039	BC	5	11	18	15	9,500	F463BC392(1)2K0(2)
2000	700	0.0047	BE	5.5	12.5	18	15	9,500	F463BE472(1)2K0(2)
2000	700	0.0056	BE	5.5	12.5	18	15	9,500	F463BE562(1)2K0(2)
2000	700	0.0068	BK	7.5	13.5	18	15	9,500	F463BK682(1)2K0(2)
2000	700	0.0082	BK	7.5	13.5	18	15	9,500	F463BK822(1)2K0(2)
2000	700	0.01	BK	7.5	13.5	18	15	9,500	F463BK103(1)2K0(2)
2000	700	0.012	BP	8.5	14.5	18	15	9,500	F463BP123(1)2K0(2)
2000	700	0.015	BS	10	16	18	15	9,500	F463BS153(1)2K0(2)
2000	700	0.018	BY	11	19	18	15	9,500	F463BY183(1)2K0(2)
2000	700	0.022	BY	11	19	18	15	9,500	F463BY223(1)2K0(2)
2000	700	0.027	BY	11	19	18	15	9,500	F463BY273(1)2K0(2)
2000	700	0.01	DB	6	14.5	26	22.5	4,500	F463DB103(1)2K0(2)
2000	700	0.012	DB	6	14.5	26	22.5	4,500	F463DB123(1)2K0(2)
2000	700	0.015	DI	7	16	26	22.5	4,500	F463DI153(1)2K0(2)
2000	700	0.018	DI	7	16	26	22.5	4,500	F463DI183(1)2K0(2)
2000	700	0.022	DH	8	16	26	22.5	4,500	F463DH223(1)2K0(2)
2000	700	0.027	DJ	8.5	17	26	22.5	4,500	F463DJ273(1)2K0(2)
2000	700	0.033	DO	10	18.5	26	22.5	4,500	F463DO333(1)2K0(2)
2000	700	0.039	DO	10	18.5	26	22.5	4,500	F463DO393(1)2K0(2)
2000	700	0.047	DP	11	20	26	22.5	4,500	F463DP473(1)2K0(2)
2000	700	0.056	DU	13	22	26	22.5	4,500	F463DU563(1)2K0(2)
2000	700	0.068	DU	13	22	26	22.5	4,500	F463DU683(1)2K0(2)
2000	700	0.082	DY	15.5	24.5	26	22.5	4,500	F463DY823(1)2K0(2)
2000	700	0.1	DY	15.5	24.5	26	22.5	4,500	F463DY104(1)2K0(2)
2000	700	0.022	FB	9	17	31.5	27.5	1,000	F463FB223(1)2K0(2)
2000	700	0.027	FB	9	17	31.5	27.5	1,000	F463FB273(1)2K0(2)
2000	700	0.033	FB	9	17	31.5	27.5	1,000	F463FB333(1)2K0(2)
2000	700	0.039	FB	9	17	31.5	27.5	1,000	F463FB393(1)2K0(2)
2000	700	0.047	FC	11	20	31.5	27.5	1,000	F463FC473(1)2K0(2)
2000	700	0.056	FC	11	20	31.5	27.5	1,000	F463FC563(1)2K0(2)
2000	700	0.068	FC	11	20	31.5	27.5	1,000	F463FC683(1)2K0(2)
2000	700	0.082	FI	13	25	31.5	27.5	1,000	F463FI823(1)2K0(2)
2000	700	0.1	FI	13	25	31.5	27.5	1,000	F463FI104(1)2K0(2)
2000	700	0.12	FN	14	28	31.5	27.5	1,000	F463FN124(1)2K0(2)
2000	700	0.15	FR	17.5	28	31.5	27.5	1,000	F463FR154(1)2K0(2)
2000	700	0.18	FS	19	29	31.5	27.5	1,000	F463FS184(1)2K0(2)
2000	700	0.22	FY	22	37	31.5	27.5	1,000	F463FY224(1)2K0(2)
2000	700	0.27	FY	22	37	31.5	27.5	1,000	F463FY274(1)2K0(2)
2000	700	0.33	FY	22	37	31.5	27.5	1,000	F463FY334(1)2K0(2)
2000	700	0.068	RB	11	22	41	37.5	500	F463RB683(1)2K0(2)
2000	700	0.082	RB	11	22	41	37.5	500	F463RB823(1)2K0(2)
2000	700	0.1	RB	11	22	41	37.5	500	F463RB104(1)2K0(2)
2000	700	0.12	RB	11	22	41	37.5	500	F463RB124(1)2K0(2)
2000	700	0.15	RF	13	24	41	37.5	500	F463RF154(1)2K0(2)
2000	700	0.18	RH	15	26	41	37.5	500	F463RH184(1)2K0(2)
2000	700	0.22	RC	16	28.5	41	37.5	500	F463RC224(1)2K0(2)
2000	700	0.27	RD	19	32	41	37.5	500	F463RD274(1)2K0(2)
2000	700	0.33	RD	19	32	41	37.5	500	F463RD334(1)2K0(2)
2000	700	0.39	RP	21	38	41	37.5	500	F463RP394(1)2K0(2)
2000	700	0.47	RP	21	38	41	37.5	500	F463RP474(1)2K0(2)
2000	700	0.56	RO	24	44	41	37.5	500	F463RO564(1)2K0(2)
2000	700	0.68	RU	30	45	41	37.5	500	F463RU684(1)2K0(2)
2000	700	0.82	RU	30	45	41	37.5	500	F463RU824(1)2K0(2)
2500	900	0.001	BB	4	10	18	15	4,500	F464BB102(1)2K5(2)
2500	900	0.0012	BB	4	10	18	15	4,500	F464BB122(1)2K5(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Table 1 – Ratings & Part Number Reference cont.

VDC	VAC	Capacitance Value (µF)	Size Code	Max Dimensions in mm			Lead Spacing (S)	dV/dt (V/µs)	Part Number
				T	H	L			
2500	900	0.0015	BB	4	10	18	15	4,500	F464BB152(1)2K5(2)
2500	900	0.0018	BB	4	10	18	15	4,500	F464BB182(1)2K5(2)
2500	900	0.0022	BB	4	10	18	15	4,500	F464BB222(1)2K5(2)
2500	900	0.0027	BC	5	11	18	15	4,500	F464BC272(1)2K5(2)
2500	900	0.0033	BC	5	11	18	15	4,500	F464BC332(1)2K5(2)
2500	900	0.0039	BE	5.5	12.5	18	15	4,500	F464BE392(1)2K5(2)
2500	900	0.0047	BE	5.5	12.5	18	15	4,500	F464BE472(1)2K5(2)
2500	900	0.0056	BK	7.5	13.5	18	15	4,500	F464BK562(1)2K5(2)
2500	900	0.0068	BK	7.5	13.5	18	15	4,500	F464BK682(1)2K5(2)
2500	900	0.0082	BK	7.5	13.5	18	15	4,500	F464BK822(1)2K5(2)
2500	900	0.01	BP	8.5	14.5	18	15	4,500	F464BP103(1)2K5(2)
2500	900	0.012	BS	10	16	18	15	4,500	F464BS123(1)2K5(2)
2500	900	0.015	BS	10	16	18	15	4,500	F464BS153(1)2K5(2)
2500	900	0.018	BY	11	19	18	15	4,500	F464BY183(1)2K5(2)
2500	900	0.022	BY	11	19	18	15	4,500	F464BY223(1)2K5(2)
2500	900	0.0047	DB	6	14.5	26	22.5	2,500	F464DB472(1)2K5(2)
2500	900	0.0056	DB	6	14.5	26	22.5	2,500	F464DB562(1)2K5(2)
2500	900	0.0068	DB	6	14.5	26	22.5	2,500	F464DB682(1)2K5(2)
2500	900	0.0082	DB	6	14.5	26	22.5	2,500	F464DB822(1)2K5(2)
2500	900	0.01	DI	7	16	26	22.5	2,500	F464DI103(1)2K5(2)
2500	900	0.012	DI	7	16	26	22.5	2,500	F464DI123(1)2K5(2)
2500	900	0.015	DJ	8.5	17	26	22.5	2,500	F464DJ153(1)2K5(2)
2500	900	0.018	DM	9	18.5	26	22.5	2,500	F464DM183(1)2K5(2)
2500	900	0.022	DO	10	18.5	26	22.5	2,500	F464DO223(1)2K5(2)
2500	900	0.027	DP	11	20	26	22.5	2,500	F464DP273(1)2K5(2)
2500	900	0.033	DU	13	22	26	22.5	2,500	F464DU333(1)2K5(2)
2500	900	0.039	DY	15.5	24.5	26	22.5	2,500	F464DY393(1)2K5(2)
2500	900	0.047	DY	15.5	24.5	26	22.5	2,500	F464DY473(1)2K5(2)
2500	900	0.056	DY	15.5	24.5	26	22.5	2,500	F464DY563(1)2K5(2)
2500	900	0.015	FB	9	17	31.5	27.5	1,500	F464FB153(1)2K5(2)
2500	900	0.018	FB	9	17	31.5	27.5	1,500	F464FB183(1)2K5(2)
2500	900	0.022	FB	9	17	31.5	27.5	1,500	F464FB223(1)2K5(2)
2500	900	0.027	FB	9	17	31.5	27.5	1,500	F464FB273(1)2K5(2)
2500	900	0.033	FC	11	20	31.5	27.5	1,500	F464FC333(1)2K5(2)
2500	900	0.039	FC	11	20	31.5	27.5	1,500	F464FC393(1)2K5(2)
2500	900	0.047	FI	13	25	31.5	27.5	1,500	F464FI473(1)2K5(2)
2500	900	0.056	FI	13	25	31.5	27.5	1,500	F464FI563(1)2K5(2)
2500	900	0.068	FI	13	25	31.5	27.5	1,500	F464FI683(1)2K5(2)
2500	900	0.082	FN	14	28	31.5	27.5	1,500	F464FN823(1)2K5(2)
2500	900	0.1	FR	17.5	28	31.5	27.5	1,500	F464FR104(1)2K5(2)
2500	900	0.12	FS	19	29	31.5	27.5	1,500	F464FS124(1)2K5(2)
2500	900	0.15	FY	22	37	31.5	27.5	1,500	F464FY154(1)2K5(2)
2500	900	0.18	FY	22	37	31.5	27.5	1,500	F464FY184(1)2K5(2)
2500	900	0.047	RB	11	22	41	37.5	900	F464RB473(1)2K5(2)
2500	900	0.056	RB	11	22	41	37.5	900	F464RB563(1)2K5(2)
2500	900	0.068	RB	11	22	41	37.5	900	F464RB683(1)2K5(2)
2500	900	0.082	RF	13	24	41	37.5	900	F464RF823(1)2K5(2)
2500	900	0.1	RF	13	24	41	37.5	900	F464RF104(1)2K5(2)
2500	900	0.12	RH	15	26	41	37.5	900	F464RH124(1)2K5(2)
2500	900	0.15	RC	16	28.5	41	37.5	900	F464RC154(1)2K5(2)
2500	900	0.18	RD	19	32	41	37.5	900	F464RD184(1)2K5(2)
2500	900	0.22	RD	19	32	41	37.5	900	F464RD224(1)2K5(2)
2500	900	0.27	RP	21	38	41	37.5	900	F464RP274(1)2K5(2)
2500	900	0.33	RO	24	44	41	37.5	900	F464RO334(1)2K5(2)
2500	900	0.39	RO	24	44	41	37.5	900	F464RO394(1)2K5(2)
2500	900	0.47	RU	30	45	41	37.5	900	F464RU474(1)2K5(2)
2500	900	0.56	RU	30	45	41	37.5	900	F464RU564(1)2K5(2)
VDC	**VAC**	**Capacitance Value (µF)**	**Size Code**	**T (mm)**	**H (mm)**	**L (mm)**	**Lead Spacing (S)**	**dV/dt (V/µs)**	**Part Number**

(1) J = 5%, K = 10%
(2) Insert lead and packaging code. See Ordering Options Table for available options.
(3) K = ±10% (only available tolerance).

Soldering Process

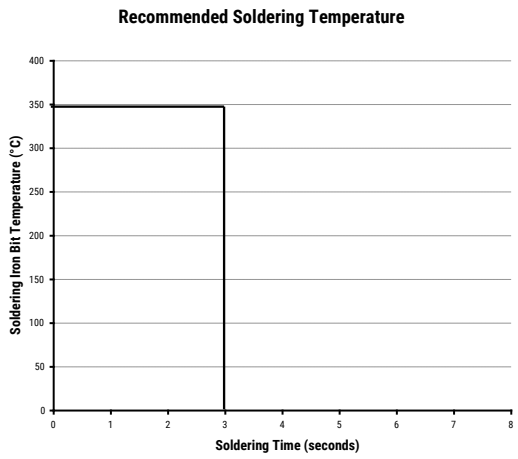
The implementation of the RoHS directive has resulted in the selection of SnAgCu (SAC) alloys or SnCu alloys as primary solder. This has increased the liquidus temperature from that of 183°C for SnPb eutectic alloy to 217 – 221°C for the new alloys. As a result, the heat stress to the components, even in wave soldering, has increased considerably due to higher pre-heat and wave temperatures. Polypropylene capacitors are especially sensitive to heat (the melting point of polypropylene is 160 – 170°C). Wave soldering can be destructive, especially for mechanically small polypropylene capacitors (with lead spacing of 5 – 15 mm), and great care has to be taken during soldering. The recommended solder profiles from KEMET should be used. Please consult KEMET with any questions. In general, the wave soldering curve from IEC Publication 61760–1 Edition 2 serves as a solid guideline for successful soldering. Please see Figure 1.

Reflow soldering is not recommended for through-hole film capacitors. Exposing capacitors to a soldering profile in excess of the above the recommended limits may result to degradation or permanent damage to the capacitors.

Do not place the polypropylene capacitor through an adhesive curing oven to cure resin for surface mount components. Insert through-hole parts after the curing of surface mount parts. Consult KEMET to discuss the actual temperature profile in the oven, if through-hole components must pass through the adhesive curing process. A maximum two soldering cycles is recommended. Please allow time for the capacitor surface temperature to return to a normal temperature before the second soldering cycle.

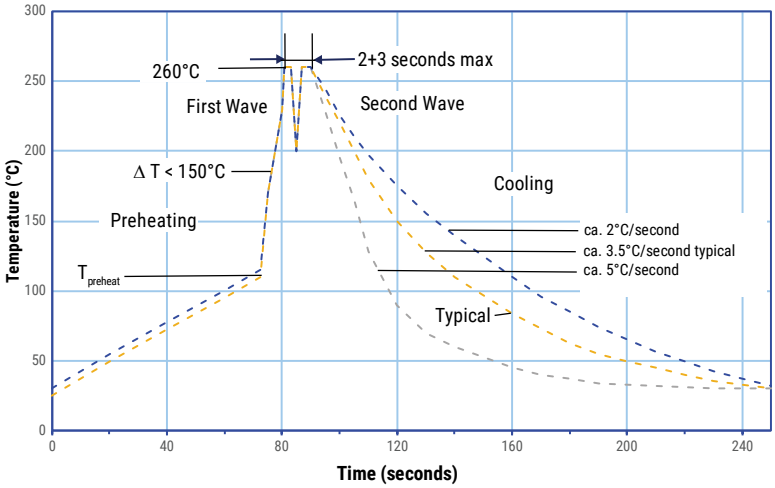
Manual Soldering Recommendations

Following is the recommendation for manual soldering with a soldering iron.



The soldering iron tip temperature should be set at 350°C (+10°C maximum) with the soldering duration not to exceed more than 3 seconds.

Wave Soldering Recommendations



Soldering Process cont.

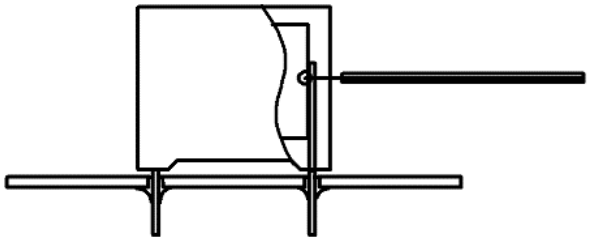
Wave Soldering Recommendations cont.

1. The table indicates the maximum set-up temperature of the soldering process
Figure 1

Dielectric Film Material	Maximum Preheat Temperature			Maximum Peak Soldering Temperature	
	Capacitor Pitch ≤ 10 mm	Capacitor Pitch = 15 mm	Capacitor Pitch > 15 mm	Capacitor Pitch ≤ 15 mm	Capacitor Pitch > 15 mm
Polyester	130°C	130°C	130°C	270°C	270°C
Polypropylene	100°C	110°C	130°C	260°C	270°C
Paper	130°C	130°C	140°C	270°C	270°C
Polyphenylene Sulphide	150°C	150°C	160°C	270°C	270°C

2. The maximum temperature measured inside the capacitor:
Set the temperature so that inside the element the maximum temperature is below the limit:

Dielectric Film Material	Maximum temperature measured inside the element
Polyester	160°C
Polypropylene	110°C
Paper	160°C
Polyphenylene Sulphide	160°C



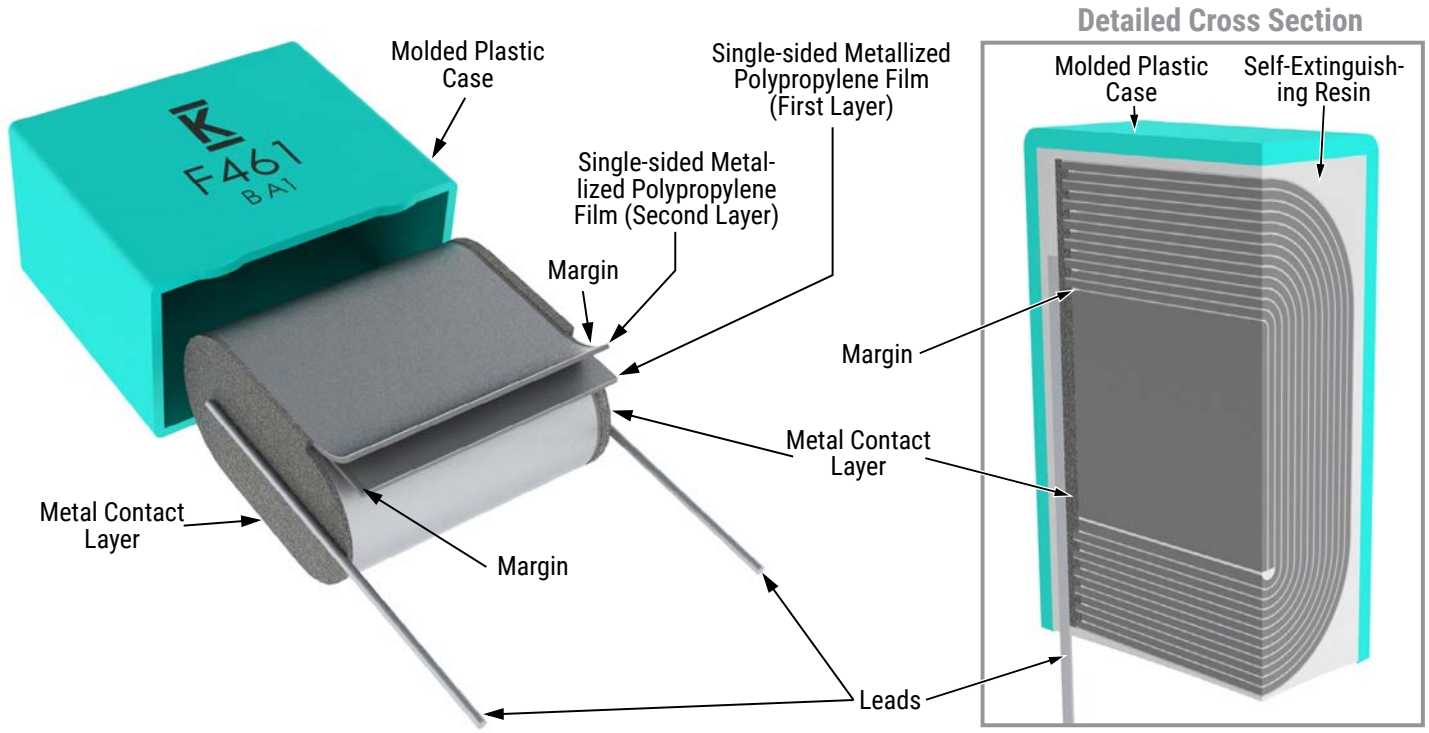
Temperature monitored inside the capacitor.

Selective Soldering Recommendations

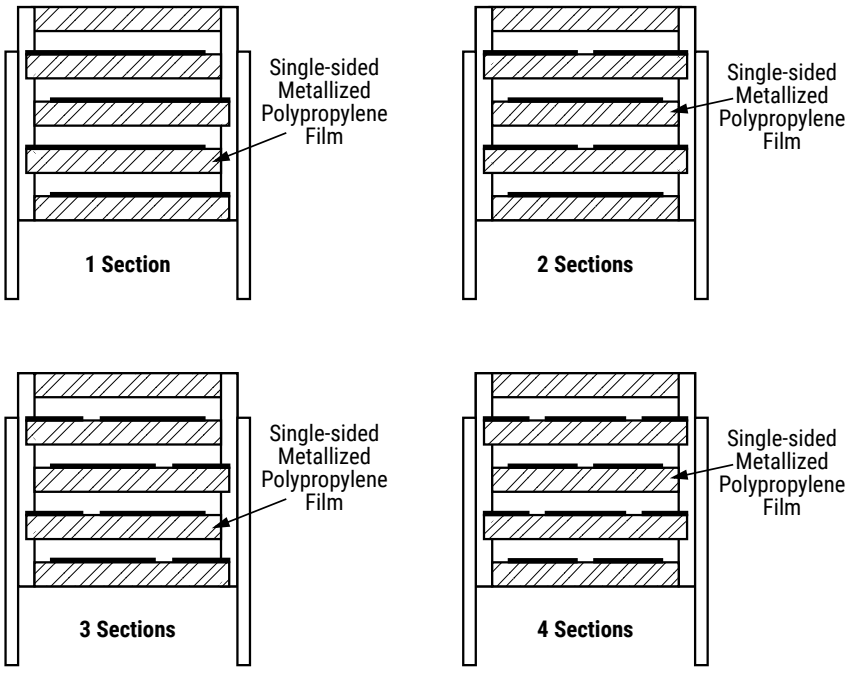
Selective dip soldering is a variation of reflow soldering. In this method, the printed circuit board with through-hole components to be soldered is preheated and transported over the solder bath as in normal flow soldering without touching the solder. When the board is over the bath, it is stopped and pre-designed solder pots are lifted from the bath with molten solder only at the places of the selected components, and pressed against the lower surface of the board to solder the components.

The temperature profile for selective soldering is similar to the double wave flow soldering outlined in this document, **however, instead of two baths, there is only one bath with a time from 3 to 10 seconds.** In selective soldering, the risk of overheating is greater than in double wave flow soldering, and great care must be taken so that the parts are not overheated.

Construction

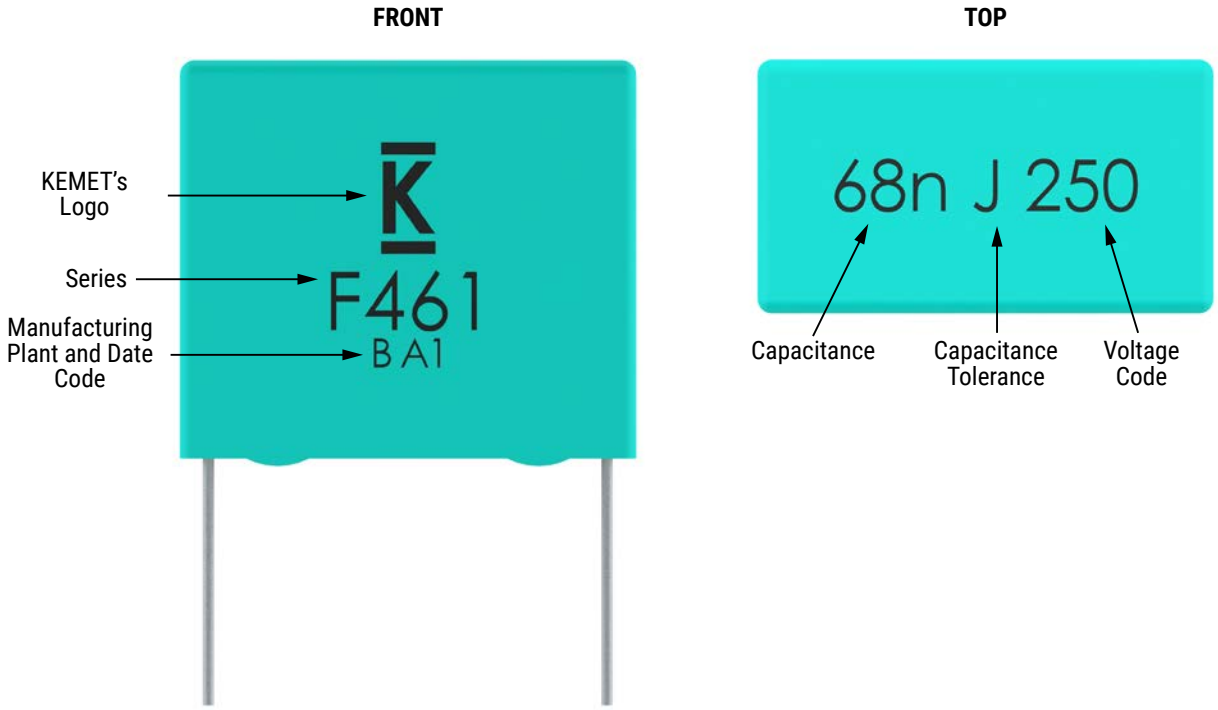


Winding Schemes

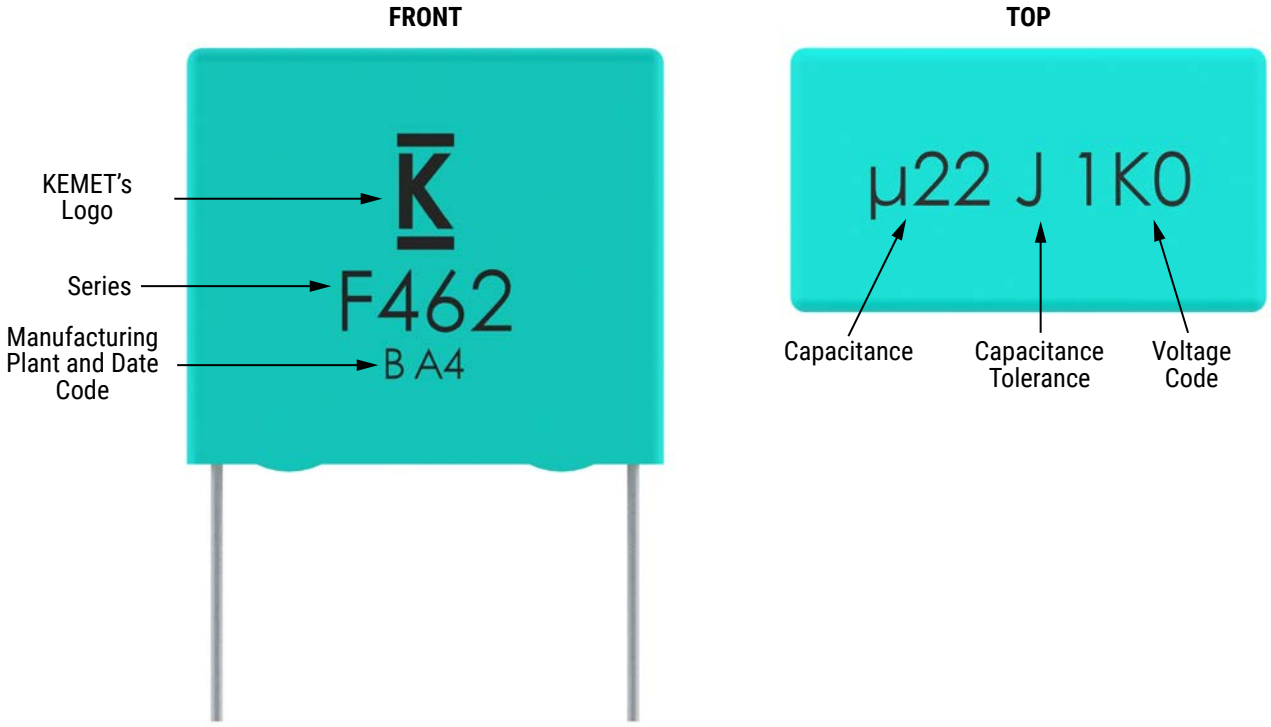


Marking

F461

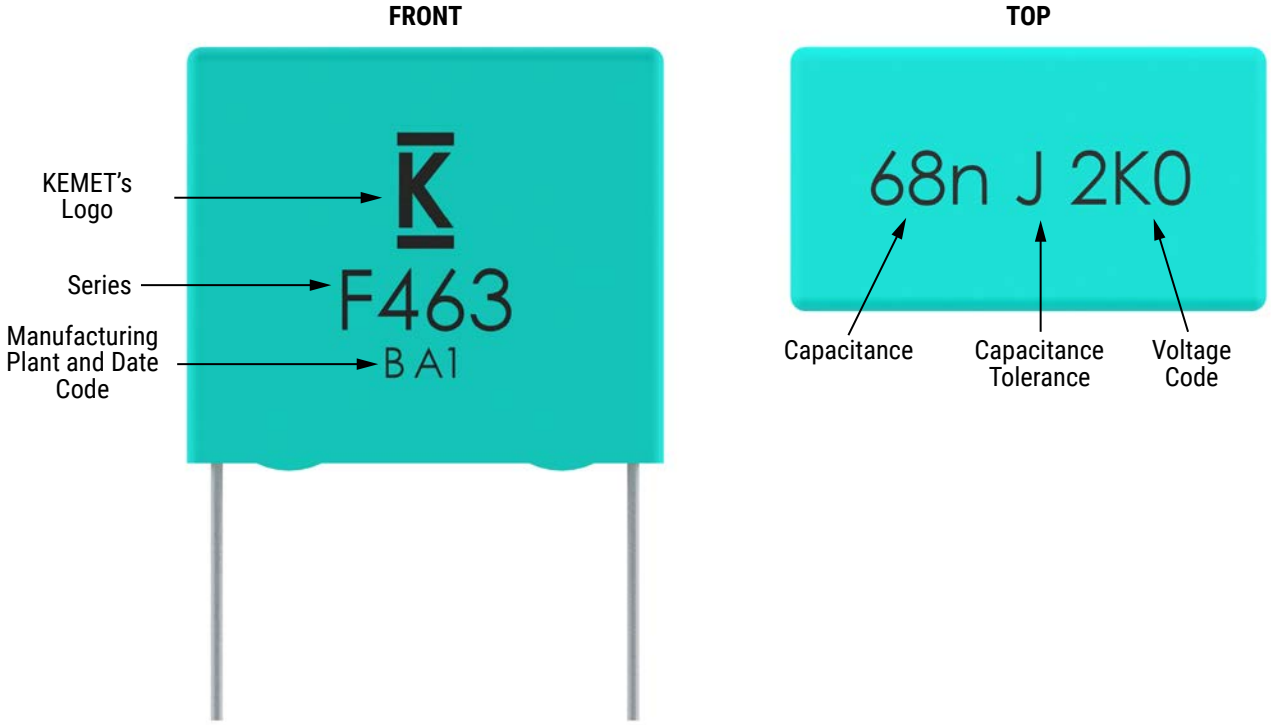


F462

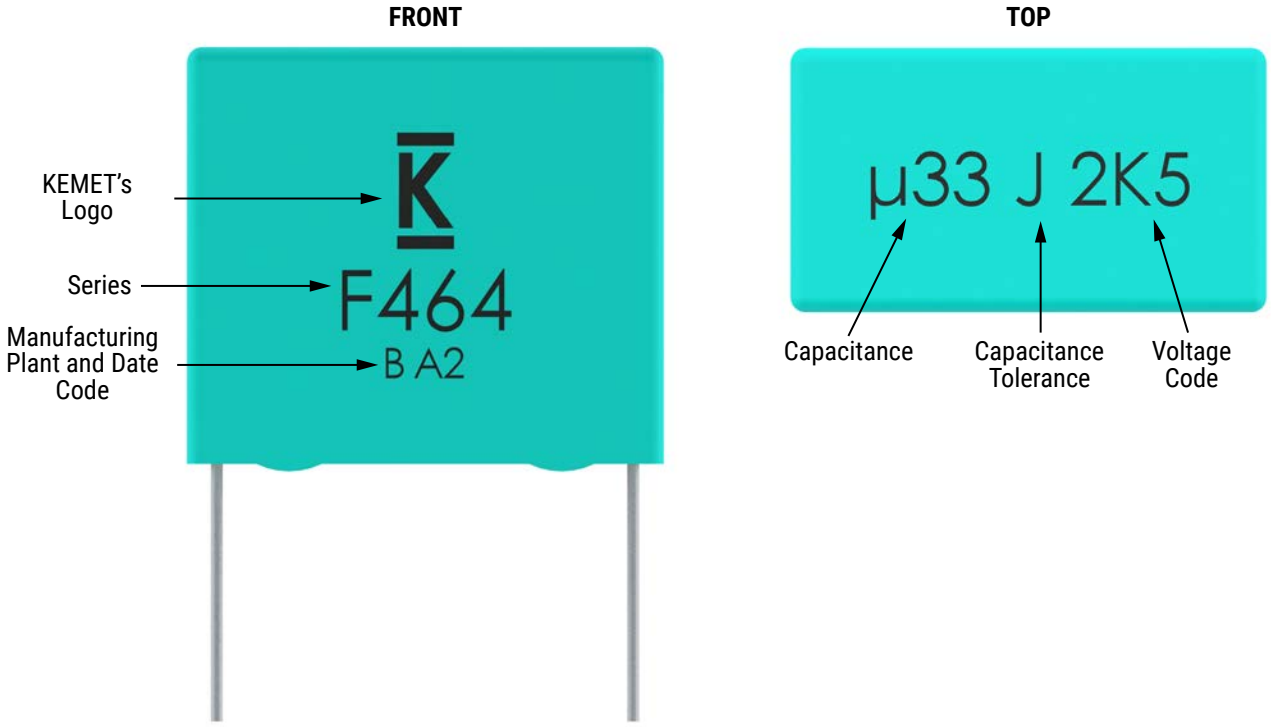


Marking cont.

F463



F464



Packaging Quantities

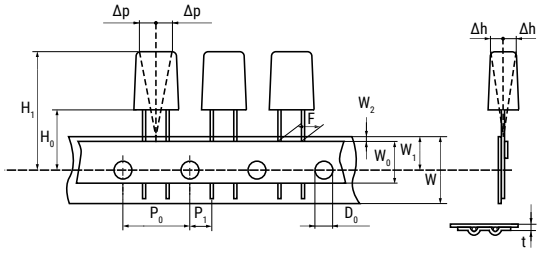
Size Code	Lead Spacing	Thickness (mm)	Height (mm)	Length (mm)	Bulk Short Leads	Bulk Long Leads	Standard Reel ø 355 mm	Large Reel ø 500 mm	Ammo	Pizza
JF	5	2.5	6.5	7.2	3,000	4,000	2,500		3,500	
JG		3.5	7.5	7.2	2,000	3,000	1,800		2,500	
JM		4.5	9.5	7.2	1,500	2,000	1,400		1,900	
JQ		5.0	10.0	7.2	1,000	1,500	1,200		1,700	
JT		6	11	7.2	2,000	1,000	1,000		1,400	
JU		7.2	13	7.2	1,500	750	800		1,150	
KE	7.5	2.5	6	10	2,000	3,000	2,500		3,500	
KF		3	8	10	1,500	1,750	2,100		2,800	
KG		4	8	10	2,000	1,500	1,500		2,100	
KJ		5	10.5	10	1,500	1,000	1,200		1,600	
KM		6	12	10.5	1,000	800	1,000		1,350	
KH		4	9	10	2,000	1,500	1,500		2,100	
AN	10	3.5	9	13	2,200	3,200	850	1,700	1,150	
AG		4	9	13	2,000	2,200	750	1,500	1,000	
AK		5	11	13	1,300	2,000	600	1,250	800	
AP		6	12	13	1,000	1,800	500	1,000	680	
AO		7	17	13	600	900	450	900	580	
AL		9.5	7.5	13	1,100	2,000	300	600	430	
AE		4	8	13	2,000	2,200	750	1,500	1,000	
BB	15	4	10	18	1,300	1,500	750	1,500	1,000	1,411
BC		5	11	18	1,000	1,250	600	1,250	800	1,139
BE		5.5	12.5	18	800	1,100	550	1,100	750	1,020
BG		6	12	18	1,750	1,000	500	1,000	680	935
BK		7.5	13.5	18	1,000	800	350	800	500	748
BI		6	17.5	18	1,000	800	500	1,000	680	935
BP		8.5	14.5	18	1,000	650	300	700	440	663
BT		9	12.5	18	1,000	700	270	650	410	629
BO		7.5	18.5	18	900	600	350	800	500	748
BS		10	16	18	750	550	300	600	380	561
BR		13	12	18	750	520	200	480	280	425
BY		11	19	18	450	400	250	500	340	510
BA		8.5	12.5	18	1,000	650	300	700	440	663
BZ		12	20	18	350	300	220	450	330	459

Packaging Quantities cont.

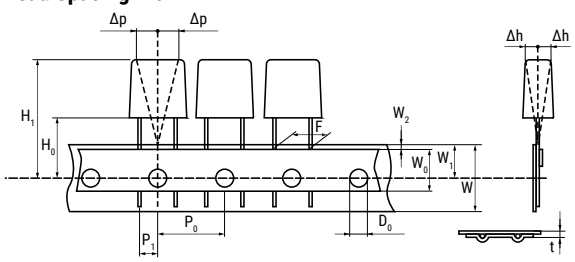
Size Code	Lead Spacing	Thickness (mm)	Height (mm)	Length (mm)	Bulk Short Leads	Bulk Long Leads	Standard Reel ø 355 mm	Large Reel ø 500 mm	Ammo	Pizza
DB	22.5	6	14.5	26	1,638	702	300	700	464	660
DI		7	16	26	1,188	594	250	550	380	564
DH		8.0	16.0	26	1,026	513	240	500	330	492
DJ		8.5	17	26	972	486	250	450	280	468
DM		9	18.5	26	918	459	200	400	300	444
DO		10	18.5	26	810	405	160	350	235	396
DP		11	20	26	756	378	190	350	217	360
DU		13	22	26	540	324	150	300	200	300
DY		15.5	24.5	26	450	270	120	250	170	252
FB	27.5	9.0	17.0	31.5	816	408				370
FC		11.0	20.0	31.5	672	336				300
FI		13.0	25.0	31.5	480	288				250
FN		14.0	28.0	31.5	352	176				230
FO		17.0	40.0	31.5	216	144				190
FR		17.5	28.0	31.5	256	128				190
FS		19.0	29.0	31.5	256	128				170
FY		22.0	37.0	31.5	168	112				150
FH		21.0	12.5	31.5	392	168				150
FQ		27.5	16.0	31.5	280	120				120
FT		31.0	19.0	31.5	240	120				100
RB	37.5	11.0	22.0	41.0	420	252				210
RF		13.0	24.0	41.0	360	216				175
RH		15.0	26.0	41.0	300	180				154
RC		16.0	28.5	41.0	216	108				140
RD		19.0	32.0	41.0	192	96				119
RP		21.0	38.0	41.0	126	84				105
RO		24.0	44.0	41.0	108	72				91
RU		30.0	45.0	41.0	90	60				77
RV		24.0	15.0	41.0	252	108				91
RW		24.0	19.0	41.0	216	108				91

Lead Taping & Packaging (IEC 60286–2)

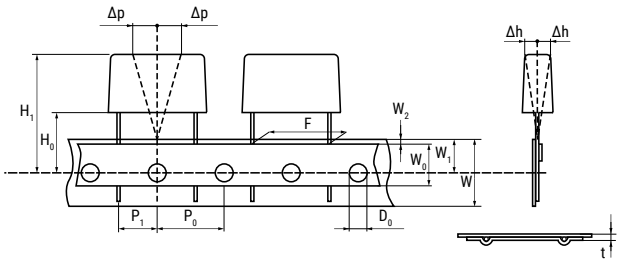
Lead Spacing 5 mm



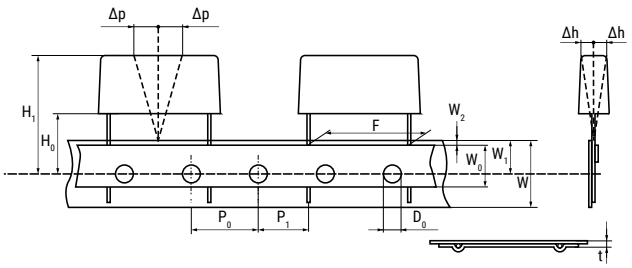
Lead Spacing 7.5 mm



Lead Spacing 10 – 15 mm



Lead Spacing 22.5 – 27.5 mm



Taping Specification

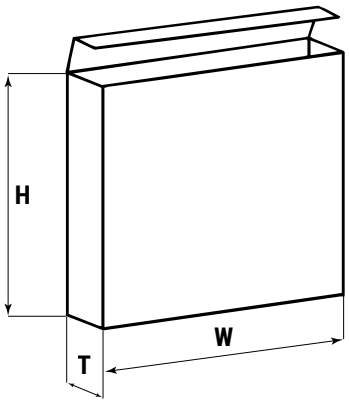
Dimensions in mm									Standard IEC 60286–2
Lead Spacing	+0.6/−0.1	F	5.0	7.5	10.0	15.0	22.5	27.5	F
Carrier Tape Width	+1/−0.5	W	18.0	18.0	18.0	18.0	18.0	18.0	$18^{+1/-0.5}$
Hold-Down Tape Width	Minimum	W_0	6.0	6.0	9.0	10.0	10.0	10.0	
Position of Sprocket Hole	±0.5	W_1	9.0	9.0	9.0	9.0	9.0	9.0	$9^{+0.75/-0.5}$
Distance Between Tapes	Maximum	W_2	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Sprocket Hole Diameter	±0.2	D_0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Feed Hole Lead Spacing	±0.2(1)	P_0(3)	12.7	12.7	12.7	12.7	12.7	12.7	12.7
Distance Lead – Feed Hole	±0.7	P_1	3.85	3.75	7.7	5.2	7.8	5.3	P1
Deviation Tape – Plane	Maximum	Δp	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Lateral Deviation	±2	Δh	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Thickness	±0.2	t	0.7	0.7	0.7	0.7	0.9^{MAX}	0.9^{MAX}	0.9^{MAX}
Sprocket Hole/Cap Body	±0.5	H_0(2)	$18.5^{\pm0.5}$	$18.5^{\pm0.5}$	$18.5^{\pm0.5}$	$18.5^{\pm0.5}$	$18.5^{\pm0.5}$	$18.5^{\pm0.5}$	$18^{+2/-0}$

(1) Maximum cumulative feed hole error, 1 mm per 20 parts.
(2) 16.5 mm available on request.
(3) 15 mm available on request (F ≥ 10 mm).

Lead Taping & Packaging (IEC 60286–2) cont.

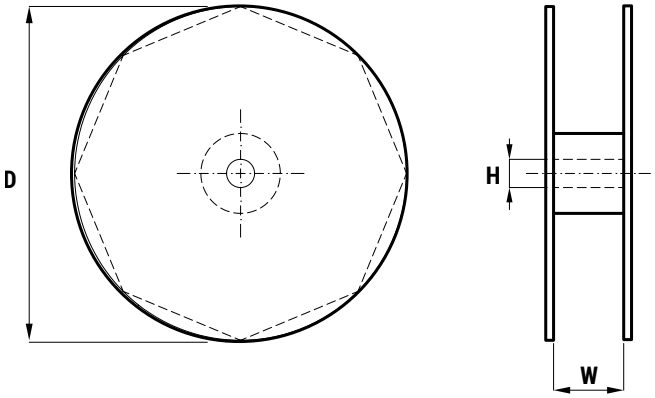
Ammo Specifications

Series	Dimensions (mm)		
	H	W	T
F5A, F5B, F5D	360	340	59
F6xx, F8xx			
PHExxx, PMExxx, PMRxxx	330	330	50



Reel Specifications

Series	Dimensions (mm)		
	D	H	W
F5A, F5B, F5D	355	30	55 (Max)
F6xx, F8xx	500	25	
PHExxx, PMExxx, PMRxxx	360 500	30	46 (Max)



KEMET Electronics Corporation Sales Offices

For a complete list of our global sales offices, please visit www.kemet.com/sales.

Disclaimer

YAGEO Corporation and its affiliates do not recommend the use of commercial or automotive grade products for high reliability applications or manned space flight.

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by KEMET with reference to the use of KEMET's products is given gratis, and KEMET assumes no obligation or liability for the advice given or results obtained.

Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product–related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

Additional information about production site flexibility can be found <here>

KEMET is a registered trademark of KEMET Electronics Corporation.