

RFS Series Datasheet

Coated Power Wirewound Fusing Resistors | Axial

ORDERING CODE - Example

New SAP Part Nr.:

RFS	230	J	T	-	52-	47R	AA
Series	* Power rating	Tol.	Pack-Code	TCR	Forming type	R Value	Special
	110 = 1,1W 230 = 2,3W 340 = 3,4W 500 = 5,0W	F = ±1% J = ±5%	T = Tape (ammo pack)	- Base on spec.	52- Inner Taping dimension or 73- Inner Taping dimension		AA = Standard

Historical VTM Part Nr.:

RF0512	2W	5	T	47R
Type	Power rating	Tol.	Pack-Code	R Value

APPLICATIONS

- Industrial
- Consumer & Electronics
- Power & Energy

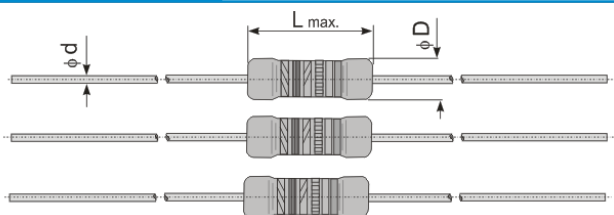
FEATURES

- Low-cost fusible type
- UL-94V-0 Flameproof
- RoHs and REACH Compliant

ELECTRICAL SPECIFICATIONS

Type		RFS110	RFS230	RFS340	RFS500
Historical Part Number		RF0410	RF0512	RF0613	RF0718
Nominal Power Rating	* P ₄₀	1,1	2,3	3,4	5,0
	P ₇₀	1,0	2,0	3,0	4,4
Resistance Range	[Ω]	R47 ... 62R	R47 ... 150R	R47 ... 240R	R56 ... 330R
E-Series (preferred)		E12 (Other upon request)			
Tolerances	±[%]	1 = F ; 5 = J			
Temperature Coefficient	±[10 ⁻⁶ K ⁻¹]	350			
Working Temperature Range	[°C]	-40 ... +155			
Thermal Resistance	[KW ⁻¹]	85	43	29	23
Insulation Resistance IEC60115-1 clause 4.6	[MΩ]	> 10 ⁴			
Max. Working Voltage	[V] _{RMS}	$\sqrt{P_{70} \times R}$			
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	[V] _{RMS}	300			
Flameproof multi-layer coating meets		UL-94V-0			
Flameproof feature meets overload test		UL-1412			

DIMENSIONS [mm]



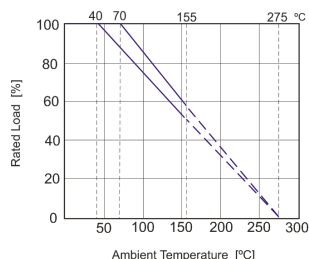
Type	Historical P/N:	L max.	Ø D max.	Ø d ±0,05
RFS110	RF0410	9,0±0,5	3,5±0,3	0,55
RFS230	RF0512	11,5±1,0	4,6±0,5	0,80
RFS340	RF0613	15,5±1,0	5,2±0,5	0,80
RFS500	RF0718	17,5±1,0	6,5±0,5	0,80

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PERFORMANCE DATA

Type		RFS110	RFS230	RFS340	RFS500
Historical Part Number		RF0410	RF0512	RF0613	RF0718
Derating Linear	[°C]	70...275 (0W)			
Climatic Category		55/155/56			
Endurance IEC60115-1 clause 4.25 ($P_{70\%}$ @ 70[°C], 1000[h]) 1,5h ON; 0,5h OFF	±[%]	5,0			
Damp Heat, Steady State IEC60115-1 clause 4.24 (40 ^{±2} [°C], 93[% r.h.], 56[d])	±[%]	5,0			
Short Time Overload IEC60115-1 clause 4.13 ($U=10 * \sqrt{P_{70\%} \times R}$ 5[s])	±[%]	2,0			
Resistance to Soldering Heat IEC60115-1 clause 4.18 (260[°C], 10[s])	±[%]	1,0			
Resistance to solvents of Marking IEC60115-1 clause 4.30 (5 ^{+0,5} [min])		No deterioration of coating and marking			
Robustness of Terminations IEC60115-1 clause 4.16 (≥2,5[kg], 10[s])	[N]	24,5			
Solderability IEC60068-2-20 (235 ⁺⁵ [°C] 3 ^{+0,5} [s])		Solder bath method (> 95% coverage)			
Marking IEC60062		Color code (5th band (blue) for failsafe version)			

DERATING CURVE



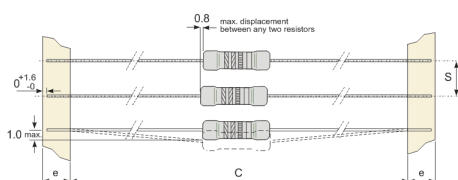
FUSING TIME

Type	Historical P/N:	Fusing Characteristics:		
		Resistance range	Times of rated power	Fusing Time max.[s]
RFS110...RFS500	RF0410,RF0512,RF0613,RF0718	≤ 2.0 Ω	36	60
		>2.0 Ω	25	60

Fusing residual resistive value at least 100 times rated resistance

PACKAGING

The standard packaging for RFS in axial type is taped, dimensions below.



Type	Historical P/N:	Pack Code	Pieces	Forming Type (Inner Taping dim.)	C	e	S
RFS110	RF0410	T = Taped Ammo pack	1000	52-	52,4	6	5
RFS230	RF0512		1000		52,4	6	5
RFS340	RF0613		1000	73-	73,0	6	10
RFS500	RF0718		250		73,0	6	10