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Version: V0
Date: 2025/3/25

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RFRT

Flange mount RF Thick Film Resistors

Typical resistance	**50Ω**
Operating frequency	**DC 3GHz**
High power dissipation	**250W~800W**

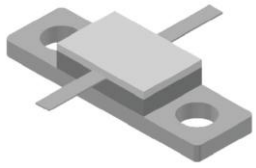
Applications

Mobile Networks
Broadcast and Television
Satellite Communications
Medical Devices
RF Amplifiers

Better Solution for Sustainable High End Manufacturing

Flange mount RF Thick Film Resistors

High power dissipation, operating frequency up to 3 Ghz



Introduction

RFRT series are high - performance flange - mount RF resistors. They are made by a thick - film process on an Aluminum Nitride (AlN) substrate, known for its excellent thermal conductivity. The flanged terminations feature high power - handling capacity and robust construction, allowing for stable connection and easy mounting.

We also offer customized design products. Customers can have the lead length, resistance value, and size meet their needs, suitable for various RF applications. After production, every resistor undergoes 100% testing to ensure quality and performance. Also, they are RoHS compliant and more cost - effective compared to those with Beryllium Oxide (BeO) - based products.

Electrical Parameters

Model	Size	Substrate	Style	Plating
RFRT250J50R0NS9	24.8*9.5*4.4mm	AlN	Flange Mount single wire	Ni+Ag
RFRT800G50R0ND9	48.3*26.6*6.5mm	AlN	Flange Mount double wire	Ni+Ag

Model	Frequency	Power 70℃	R value Ω	TCR ppm/℃	Tolerance %	Operating temp
RFRT250J50R0NS9	DC-3GHz	250W	50	150	±5	-55 to +150℃
RFRT800G50R0ND9	-	800W	50	300	±2	-55 to +150℃

Part Number Information

Example: RFRT800G50R0ND9 (RFRT 800W ±2% 50Ω AlN Double wire Standard)

R	F	R	T	8	0	0	G	5	0	R	0	N	D	9

Series	Power rating	Tolerance	Resistance	Substrate	OF Wire	Code
RFRT	250=250W 800=800W	G=±2.0% J=±5.0%	50R0=50Ω	N=AlN	S=Single wire D=Double wire	9=Standard

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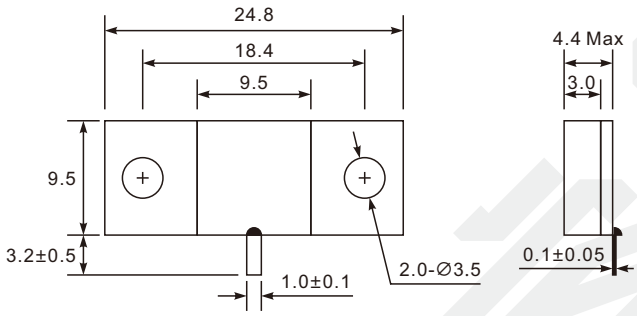
Dimensions

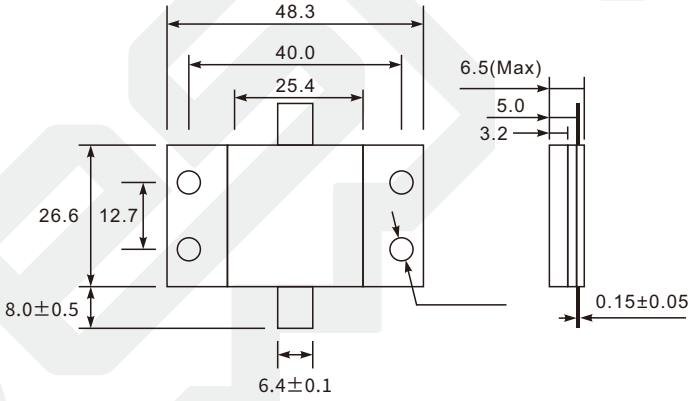
Resistor

Unit：mm
Unremarked dimension's tolerance: ±0.25mm

RFRT250J50R0NS9



RFRT800G50R0ND9



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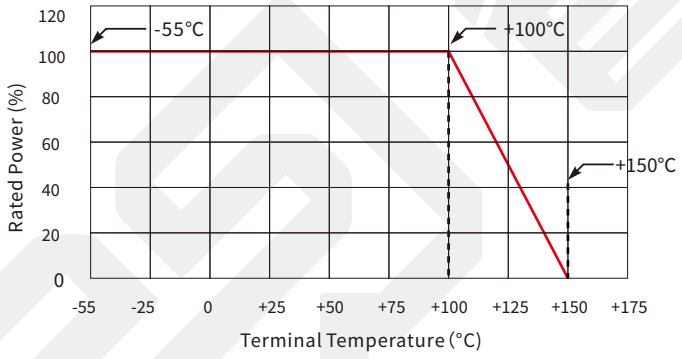
Performance

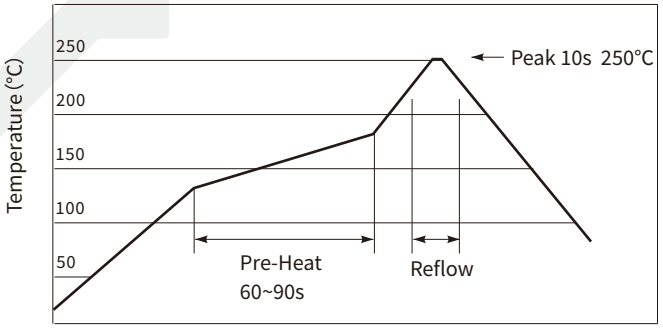
Test	Test Method	Standards	Test Limits
Thermal Shock	-55°C to +125°C 30 Minutes Dwell, 5 Cycles	MIL-STD-202 Method 107	△R≤±5.0%+0.05Ω)
Short Time Overload	Apply 1.1x Rated Power for 5 Seconds.	IEC 60115-1 4.13	△R≤±5.0%+0.05Ω)
Bias Humidity	85°C , 85%RH, 96h	MIL-STD-202 Method 103	△R≤±5.0%+0.05Ω)
Resistance to Soldering Heat	+260°C tin bath for 10s	MIL-STD-202 Method 210Test Condition "J"	△R≤±5.0%+0.05Ω)
Solderability	+245C tin bath for 3s	AEC-Q200 TEST 18 / IEC 60115-1 4.17	>95% Covered
High Temperature Storage	125°C ±2°C for 500 Hours	MIL-STD-202 Method 108	△R≤±5.0%+0.05Ω)
Load life	70°C+2°C ,1000 hours,1.5 hr ON, 0.5 hr OFF cycle	MIL-STD-202 Method 108	△R≤±3.0%+0.05Ω)

Derating Curve



Reflow Soldering Profile

Resistor Surface Temperature:
Pre-Heat: +130°C~+180°C,60~90sec.
Reflow: Above +220°C,30~90sec.
Max. Temperature: +240°C~+250°C, within 10sec.
Applicable Solder Composition: Sn-Ag-Cu solder
Cycles: limited to 2 (cooling between the first and second reflow)



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Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2025.3.25	CFD

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