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Thin Film Precision Chip Resistors

Features

- RSTNFTP – Precision Thin Film
- RSTNFTP – 0805 package
- Operating temperature up to 175°C for 1000 hr
- Rated dissipated up to 0.4W
- Superior temperature cycling robustness
- Advanced sulfur resistance verifies according to ASTM B 809
- Manufactured in accordance with AEC-Q200 compliance

RS PRO Thin Film Chip Resistors RSTNFTP Series

RS Stock No.:

243-0642, 243-0643, 243-0644, 243-0645, 243-0646, 243-0647, 243-0648, 243-0650, 243-0651, 243-0652, 243-0653, 243-0654, 243-0656, 243-0657, 243-0658, 243-0659, 243-0660, 243-0662, 243-0663, 243-0664, 243-0665, 243-0666, 243-0667, 243-0668, 243-0669, 243-0670, 243-0671, 243-0672, 243-0673, 243-0674, 243-0675, 243-0676, 243-0678, 243-0679, 243-0680, 243-0681, 243-0682, 243-0684, 243-0685, 243-0686, 243-0687, 243-0688, 243-0689, 243-0690



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Thin Film Precision Chip Resistors

Product Description

Applications Include:

- Automotive
- Industrial
- High power and high temperature applications
- Replacement for larger case sizes

Dimensions

Type	RS Article	Size (Inch)	L	W	T	D1	D2	Weight (g) (1000pcs)
RSTNFTP05	2430643 2430645 2430647 2430650 2430652 2430654 2430657 2430659 2430662 2430664 2430666 2430668 2430670 2430672 2430674 2430676 2430679 2430681 2430684 2430686 2430688 2430690 2430642 2430644 2430646 2430648 2430651 2430653 2430656 2430658 2430660 2430663 2430665 2430667 2430669 2430671 2430673 2430675 2430678 2430680 2430682	0805	2.00±0.15	1.25±0.15	0.553±0.10	0.30±0.20	0.40±0.20	7.71

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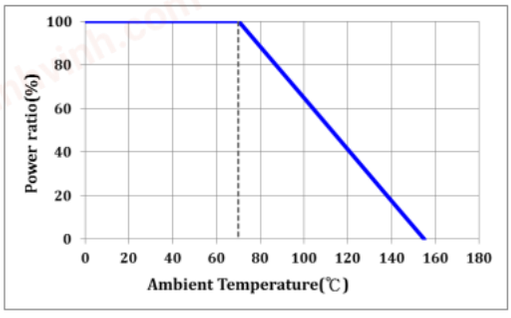
	2430685 2430687 2430689							

Part Number Make Up

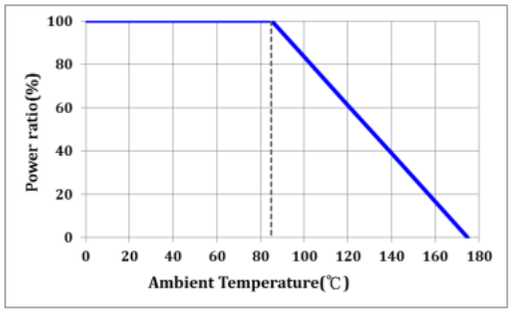
Part Number	Package Dimensions	Resistance Tolerance	Packaging Code	TCR (PPM/°C)	Resistance Ohmic value	Marking Code
RSTNFTP	05:0805	B:±0.1%	T: Taping Reel	C: ±25	0100: 10Ω 10R2: 10.2Ω 1000: 100Ω 1001: 1KΩ 1002: 10KΩ 1003: 100KΩ	A: Automotive Grade

Derating Curve

Derating – Power Operation



Derating – Advanced Power Operation



Thin Film Precision Chip Resistors

Electrical Specifications

Type	RS Article	Power Rating at 70°C	Operating Temp. Range	Max Operating Voltage	Max. Overload Voltage	Resistance Range ±0.1%	TCR (PPM/°c)
RSTNFTP05 (0805)		2/5W	-55~+175°c	150V	300V	47Ω - 100KΩ	±25

Environmental Characteristics

Item	Requirement			Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec			MIL-STD-202 Method 304 +25/-55/+25/+125/+25°C
Short Time Overload (Power operation mode)	±0.25%			JIS-C-5201-1 4.13 RCWV*2.5 or Max. overload voltage whichever is lower for 5 seconds
Insulation Resistance	>1000MΩ			MIL-STD-202 Method 302 Apply 100VDC for 1 minute
Endurance	Power at 70°C	1000hrs	±0.20%	MIL-STD-202 Method 108A RCWV with 1.5 hrs "ON" and 0.5 hrs "OFF" 1000hrs
		8000hrs	±0.40%	
	Advanced temperature at 85°C	1000hrs	±0.30%	
High Temperature Exposure	±0.20%	+155°C		MIL-STD-202 Method 108 1000 hrs
	±0.30%	+175°C		
Temperature Cycling	±0.25%			JESD22 Method JA-104 -55°c to +155°C, 1000 cycles
Biased Humidity	Power operation mode ±0.5%			MIL-STD-202 Method 103 1000hrs 85°C/85%RH 10% of operating power (≤100V)
Bending Strength (Board Flex)	±0.1%			JIS-C-5201-1 4.33 Bending once for 60 seconds Bending displacement: 0805 size: 3 mm
Solderability	95% min. coverage			JIS-C-5201-1 4.17 IEC-60115-1 4.17 245±5°C for 10 seconds
Resistance to Soldering Heat	±0.1%			JIS-C-5201-1 4.18 IEC-60115-1 4.18 260±5°C for 10 seconds
Terminal Strength	No broken			AEC-Q200-006 Force of 1.8kg for 60 seconds
Mechanical Shock	±0.1%			MIL-STD-202 Method 213 Wave Form: Tolerance for half sine shock pulse. Peak value is 100g's. Normal duration (D) is 6.
Vibration	±0.1%			MIL-STD-202 Method 204 5g's for 20min., 12 cycles each of 3

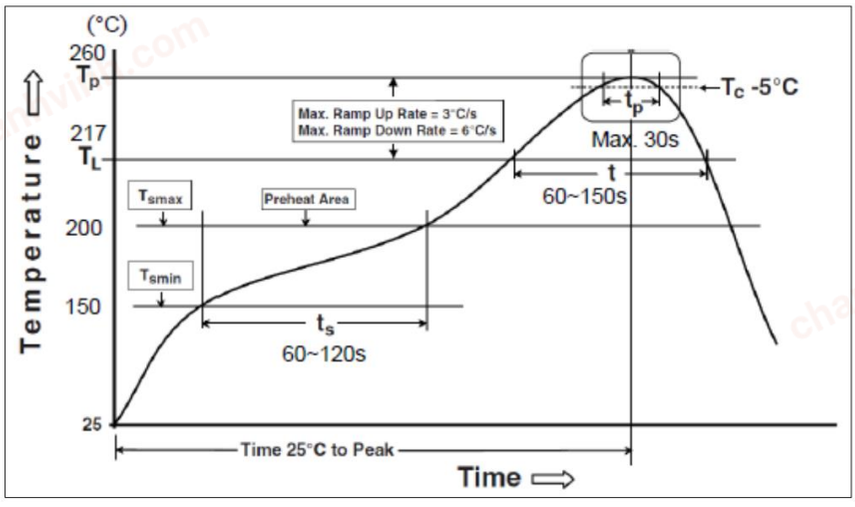
		orientations, 10-200Hz
ESD	±0.5%	AEC-Q200-002 Human body model 0805: 1.5KV
Resistance to solvents	Marking unsmeared	MIL-STD-202 Method 215 Add Aqueous wash chemical – OKEM Clean or equivalent. Do not use banned solvents.
Flammability	No ignition of the tissue paper of scorching of the pine board	UL-94 V-0 or V-1 are acceptable. Electrical test not required.

RCWV(Rated continuous working voltage)= √(P*R) or Max. Operating voltage whichever is lower

- Storage Temperature: 15~28°C; Humidity < 80%RH
- Shelf Life: 2 years from production date.

Soldering Condition

(IPC/JEDEC J-STD-020 & J-STD-002)



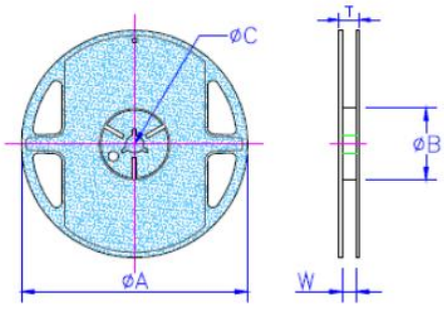
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Packaging

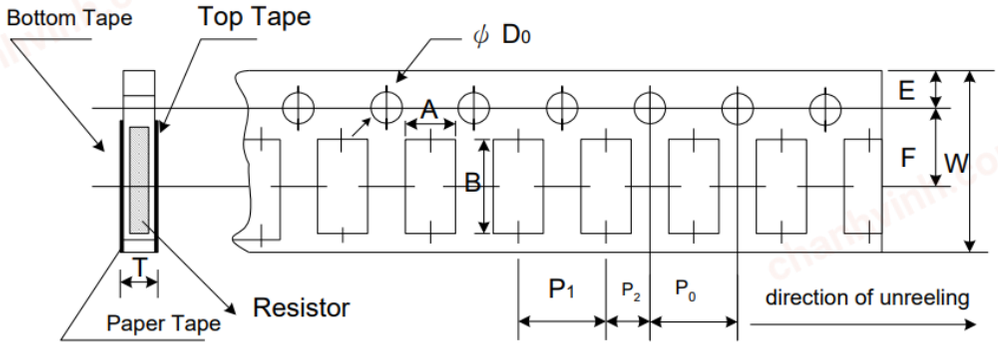
Packaging Quantity & Reel Specification

Unit:mm

Type	ØA	ØB	ØC	W	T	Paper Tape (EA)
RSTNFTP05	178.0±1.0	60.0+1.0	13.5±0.7	9.5±1.0	11.5±1.0	5,000

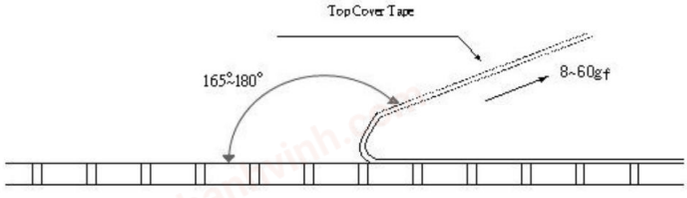


Paper Tape Specifications



Type	A	B	W	E	F	P0	P1	P2	ΦD0	T
RSTNFTP 05	1.60±0.05	2.37±0.05	8.00±0.10	1.75±0.05	3.5±0.05	4.00±0.10	4.00±0.10	2.00±0.05	1.55±0.03	0.75±0.05

- Peel force top cover tape
- The peel speed shall be about 300mm/min±5%
- The peel force of top cover tape shall be between 8gf to 60gf

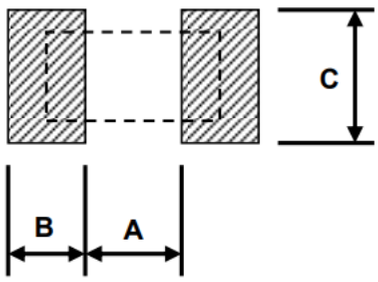


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Recommended Land Pattern

Type	A	B	C
RSTNFTP05	1.00	1.00	1.35±0.2

Unit:mm



Similar Products

MPN	RS Article Number	
	SSM	MPQ
RSTNFTP05BTC0470A	2430643	2430642
RSTNFTP05BTC0560A	2430645	2430644
RSTNFTP05BTC1000A	2430647	2430646
RSTNFTP05BTC1001A	2430650	2430648
RSTNFTP05BTC1002A	2430652	2430651
RSTNFTP05BTC1003A	2430654	2430653
RSTNFTP05BTC1500A	2430657	2430656
RSTNFTP05BTC1502A	2430659	2430658
RSTNFTP05BTC2001A	2430662	2430660
RSTNFTP05BTC2200A	2430664	2430663
RSTNFTP05BTC2201A	2430666	2430665
RSTNFTP05BTC2202A	2430668	2430667
RSTNFTP05BTC3300A	2430670	2430669
RSTNFTP05BTC3301A	2430672	2430671
RSTNFTP05BTC3302A	2430674	2430673
RSTNFTP05BTC4700A	2430676	2430675
RSTNFTP05BTC4701A	2430679	2430678

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RSTNFTP05BTC4702A	2430681	2430680
RSTNFTP05BTC5112A	2430684	2430682
RSTNFTP05BTC5600A	2430686	2430685
RSTNFTP05BTC5601A	2430688	2430687
RSTNFTP05BTC5602A	2430690	2430689

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