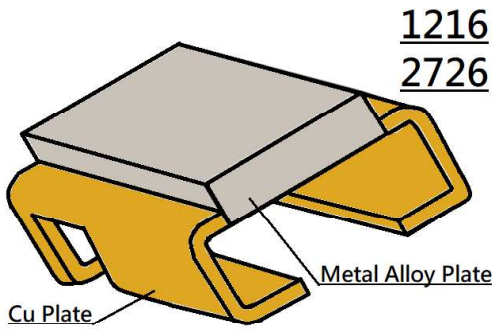
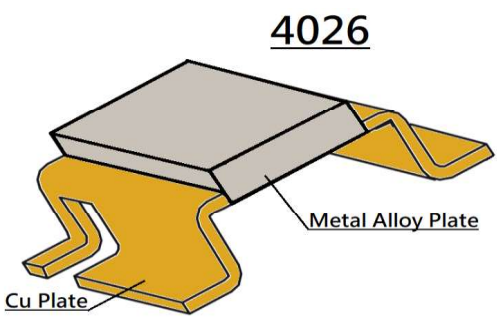
■ Metal Alloy Shunt Four Terminal Low-Resistance Chip Resistor— SRF Series





■ Application

— High current Power modules

— High current Power Supply

— Motor Driver

— Industrial control

— Battery management system

■ Features

— Low Resistance / TCR

— Excellent long-term stability

— RoHs compliant and halogen free.

— Lead free.

— High precision current sensing and voltage division.

— Excellent Anti-Surge ability .

— Four terminal construction.(Down size to 1216)

— AEC-Q200 compliant

■ Parts Number Explanation

■ Example:

SRF	2726	30	F	R004	F	Z
Product Type	Size (Inch)	Rated Power	Tolerance	Resistance	Material	Optional
	1216 2726 4026	30=3.00W 40=4.00W 50=5.00W 60=6.00W 70=7.00W	F : ±1% G : ±2% J : ±5%	0m50=0.5mR R001=1.0mR R005=5mR	S : MnCuSn M : MnCu F : FeCrAl	

■ Standard Electrical Specifications

Type	Power Rating at 70℃	T.C.R. (ppm/℃)	Max. Rating Current(A)	Max. Overload Current(A)	Resistance Range (mΩ) 1.0% (F) 2.0% (G) 5.0% (J)	Material	Operating Temperature Range (℃)
SRF1216	5W	≦±50	100.00	223.60	0.5	MnCuSn	- 65 ~ + 170
	3W	≦±50	54.77	122.47	1	MnCu	
SRF2726	7W	≦±50	118.31	264.58	0.5	MnCuSn	
	6W	≦±50	77.46	173.21	1	MnCu	
	6W	≦±50	54.77	122.47	2	FeCrAl	
	4W	≦±50	36.51	81.64	3	FeCrAl	
	3W	≦±50	27.39	61.24	4	FeCrAl	
	3W	≦±50	24.49	54.77	5	FeCrAl	
SRF4026	7W	≦±50	187.08	418.33	0.2	MnCuSn	
	7W	≦±50	118.32	264.58	0.5	MnCuSn	
	6W	≦±50	77.46	173.21	1	MnCu	
	4W	≦±50	36.51	81.64	3	FeCrAl	

- For non-standard parts, please contact our sales dept.
- Power rating is guaranteed when terminal temperature of resistor is below 70℃

■ Type Dimension

■ Dimension

Unit：mm

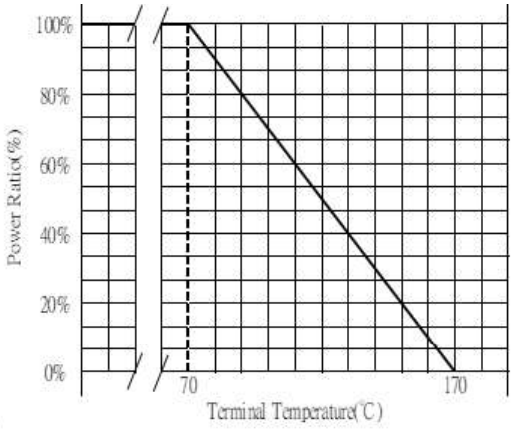
TYPE	Resistance	L	W	H	T	A	S	N	R
SRF1216	0.5mR	3.0±0.30	3.81±0.30	1.80(Ref)	0.30±0.20	1.3±0.30	0.50(Ref.)	0.60(Ref.)	2.7(Ref.)
	1mR	3.0±0.30	3.81±0.30	1.80(Ref)	0.30±0.20	1.3±0.30	0.50(Ref.)	0.60(Ref.)	2.7(Ref.)
SRF2726	0.5mR	6.9±0.30	6.6±0.30	2.85(Ref)	0.45±0.20	1.9±0.30	0.70(Ref.)	1.0(Ref.)	5.0(Ref.)
	1mR			2.85(Ref)	0.37±0.20				5.0(Ref.)
	2mR			2.85(Ref)	0.55±0.20				5.0(Ref.)
	3mR			2.85(Ref)	0.37±0.20				5.0(Ref.)
	4mR			2.85(Ref)	0.37±0.20				5.0(Ref.)
	5mR			2.85(Ref)	0.37±0.20				5.0(Ref.)
SRF4026	0.2mR	10.1±0.30	6.6±0.30	2.85(Ref)	0.40±0.20	1.9±0.30	0.70(Ref.)	1.0(Ref.)	5.0(Ref.)
	0.5mR			2.85(Ref)	0.45±0.20				
	1mR			2.85(Ref)	0.37±0.20				
	3mR			2.85(Ref)	0.37±0.20				

■ Performance Characteristics

Power Derating Curve

The Operating Temperature Range: -65°C ~+170°C.

Terminal temperatures above 70°C, power rating must be derated in accordance with the curve as below：



■ Rating Current

The following equation may be used to determine the DC (Direct Current) or AC (Alternating Current) (RMS, root mean square value) of normal rated power. However, if the result value exceeds the highest current of regulated standards, the highest normal rated power is to be used

$$I = \sqrt{P/R}$$

I = Rating current (A)
P= Rating Power (W)
R= Resistance(Ω)

■ Marking Format:

- All the products marking are 3 digits.
- “L” designates the decimal location in milliohm

  e.g. 3mΩ the product marking is 3L0.

  0.3mΩ the product marking is L30.
- The criteria to distinguishing the mark on the surface of products are that characters can be identified.

■ Reliability Test and Requirement

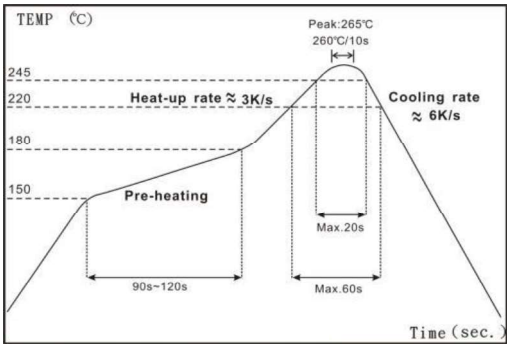
Test Item	Test Method	Procedure	Requirements
Temperature Coefficient of Resistance (T.C.R)	JIS-C-5201-1 4.8 IEC-60115-1 4.8	At 25℃ /+125℃, 25℃ is the reference temperature	As Spec
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	The number of rated power are as follows: ● SRF1216: 5 times of rated power ● SRF2726: 5 times of rated power ● SRF4026: 5 times of rated power for 5 seconds.	ΔR/R1≦±(1.0%+0.0005Ω)
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	1000 hrs. @ T=170°C. Unpowered. Measurement at 24±4 hours after test conclusion.	ΔR/R1≦±(1.0%+0.0005Ω)
Biased Humidity	MIL-STD-202 Method 103	1,000 hours; 85°C / 85% RH, 10% of operating power. Measurement at 24±4 hours after test conclusion.	ΔR/R1≦±(1.0%+0.0005Ω)
Operation Life	MIL-STD-202 Method 108	Condition D Steady State TA=125°C at derated power. Measurement at 24±4 hours after test conclusion.	ΔR/R1≦±(1.0%+0.0005Ω)
Moisture Resistance	MIL-STD-202, Method 106	Humidity of 90~98% and a temperature of 25°C / 65°C ,10 cycles	ΔR/R1≦±(1.0%+0.0005Ω)
Temperature Cycling	JESD22 Method JA-104	1000 Cycles (-55°C to +155°C) Measurement at 24±4 hours after test conclusion. 30min maximum dwell time at each temperature extreme.	ΔR/R1≦±(1.0%+0.0005Ω)
Mechanical Shock	MIL-STD-202 Method 213	)Test ½ Sine Pulse, Peak value: 100g, normal duration: 6ms, Velocity change:12.3ft/sec.	ΔR/R1≦±(0.5%+0.0005Ω)
Vibration	MIL-STD-202 Method 204	5 g's for 20 min., 12 cycles each of 3 orientations. Note: Test from 10-2000Hz	ΔR/R1≦±(0.5%+0.0005Ω)
Board Flex	AEC Q200-005	Beading once for 60 seconds ,2mm	ΔR/R1≦±(1.0%+0.0005Ω)
Solderability	J-STD-002	(1) 4 hrs 155℃ dry heat (2) 245±5℃ 3 sec.	>95% coverage(electrode area)

● Note: All Reliability test should follow De-rating curve , terminal temperature of component should be below 70℃.

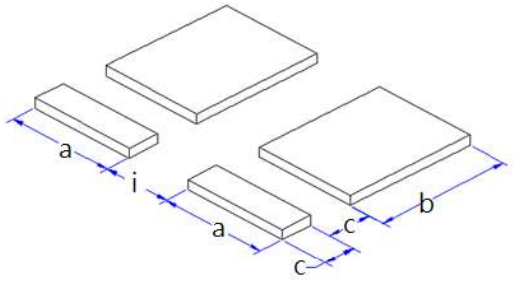
● Note : Footprint size, solder insufficient, excessive solder, solder void and component shifted will affect the resistance accuracy after IR reflow. Circuit calibration is a must to be done by functional test.

■ Recommended Customer Soldering Parameters:

■ Solder reflow Temperature condition



■ Recommend Land Pattern Design



■ Dimension

Unit: mm

TYPE	Resistance Range	a	b	c	i
SRF1216	0.5mR-1mR	1.5	2.95	0.6	0.6
SRF2726	0.5mR-5mR	2.9	5.6	1	2
SRF4026	0.2mR-3mR	2.44	5.6	0.9	5.8

■ Packing Quantity

TYPE	PCS /Reel
SRF1216	3,000
SRF2726	1,400
SRF4026	1,400

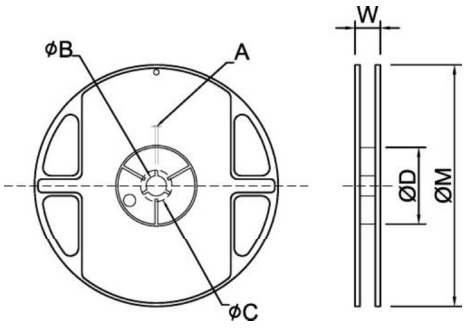
■ Storage Temperature

Temperature：25±5℃, Humidity：60±20%

■ Appendix For SMD Chip Resistor

● Packaging Information

■ Reel Dimensions

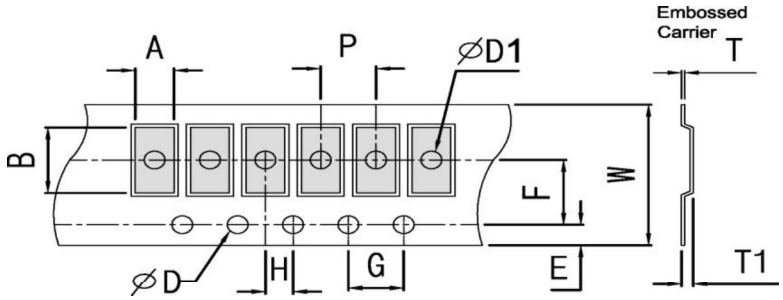


■ Dimension

Unit: mm

Reel Type / Tape	A	φB	φC	φD	W	φM
13” reel for 12 mm embossed	2.3±0.5	13.5±0.5	17.7±0.5	99.0±0.5	16.7±0.5	330±1.0
13” reel for 16 mm embossed	2.3±0.5	13.5±0.5	17.7±0.5	99.0±0.5	20.7±0.5	330±1.0
13” reel for 24 mm embossed	2.5±0.5	13.5±0.5	17.7±0.5	99.0±0.5	29.4±0.5	330±1.0

■ Embossed Dimensions



■ Dimension

Unit: mm

Item	Resistance(Ω)	W	P	E	F	ØD	G	H	A	B	T1
SRF1216	0.5m~1m	12.0±0.30	8.0±0.10	1.75±0.10	5.5±0.10	$1.50^{+0.1}_{0}$	4.0±0.10	2.0±0.10	3.3±0.10	4.3±0.10	2.3±0.10
SRF2726	0.5m~5m	16.0±0.30	12.0±0.10	1.75±0.10	7.5±0.10	$1.50^{+0.1}_{0}$	4.0±0.10	2.0±0.10	7.0±0.10	7.0±0.10	3.1±0.10
SRF4026	0.2m-3m	24.0±0.30	12.0±0.10	1.75±0.10	11.5±0.10	$1.50^{+0.1}_{0}$	4.0±0.10	2.0±0.10	6.9±0.10	10.4±0.10	3.2±0.10

单击下面可查看定价，库存，交付和生命周期等信息

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