

SPECIFICATION SHEET NO.	T0825 – SMF2WL560RFS01	
ORIGINAL MFG/PART NO.	Aillen Capacitors/SMF2WL560RF	
NEXTGEN PART CODE	SMF2WL560RFS01	Indicate This Code For RFQ /Order
DATE	Aug. 25, 2026	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARBMETRICS	SMD Power Metal Film Chip Resistors, SMF series, Power Rated Wattage 2W Resistance Value 560Ω Tolerance $\pm 1\%$ Operating Temp. Range -55°C ~ +200°C Package in Tape/Reel, 2000pcs/Reel REACH/RoHS/RoHS III Compliant and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE		
Issued/Checked/Approved		
Effective Date: Aug. 25, 2026		

CUSTOMER APPROVE
Date:

MAIN FEATURE

- Flameproof UL94V0 Molded Package, Resistant To Heat, Humidity & Insulation
- Wide Resistance Value Range and Tolerance: $\pm 1\%$ or $\pm 5\%$
- Power Rated Wattage Range 2W, 3W, 5W
- Special Design For Automatic Surface Mounting
- Excellent Mechanical Strength & Electrical Stability
- Ultra High Thermal Conductivity Material, Excellent Power Dissipation In



Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- Small Volume
- Moisture Sensitivity Level (MSL) 1
- Short Lead Time
- Cross Competitors Parts and More
- REACH/RoHS/RoHS III Compliant and Halogen Free (HF)



APPLICATION

- Home Application, Consumer Electronics and Computer
- Telecommunications Equipment
- Control Instruments

ELECTRICAL CHARACTERISTICS

- See Page 5 ~Page 6 for Different Part Code
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

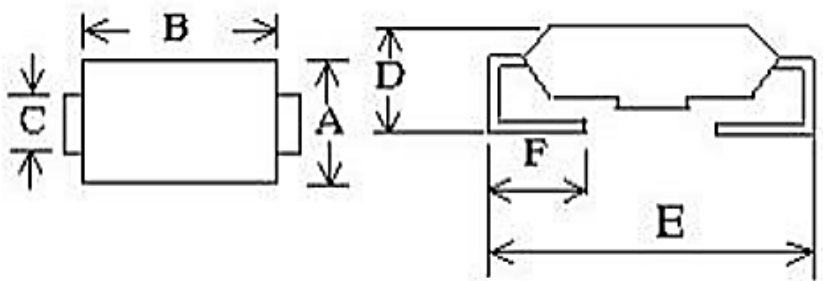
- Please Follow Up Part Code Guide And Indicate NextGen Part Code SMF2WL560RFS01 For RFQ and Order.

PART CODE GUIDE

RFQ
[Request For Quotation](#)

CODE	NAME	KEY SPECIFICATION OPTION
SMF	Product Series	SMD Power Metal Film Chip Resistors, SMF series
2WL	Power Rated Wattage	2WL: Power Rated Wattage 2W; 3WL: Power Rated Wattage 3W; 5WL: Power Rated Wattage 5W;
560R	Nominal Resistance Value	Ω, KΩ Are Its Unit Which Be In Accordance With JIS-C6409 Article 6 (EIA RS-196A) Series. Letter "10R" indicates resistance value 10Ω. Letter "10K" indicates resistance value 10KΩ 0R1: 0.1Ω; 0R27: 0.27Ω; 0R56: 0.56Ω; 0R68: 0.68Ω; 0R82: 0.82Ω; 1R: 1Ω; 1R5: 1.5Ω; 1R8: 1.8Ω; 2R2: 2.2Ω; 2R7: 2.7Ω; 3R: 3Ω; 3R3: 3.3Ω; 4R7: 4.7Ω; 5R: 5Ω; 9R7: 9.7Ω; 10R: 10Ω; 15R: 15Ω; 22R: 22Ω; 27R: 27Ω; 33R: 33Ω; 47R: 47Ω; 51R: 51Ω; 56R: 56Ω; 75R: 75Ω; 100R: 100Ω; 150R: 150Ω; 200R: 200Ω; 220R: 220Ω; 240R: 240Ω; 270R: 270Ω; 330R: 330Ω; 560R: 560Ω; 1K: 1KΩ; 2K: 2KΩ; 2K4: 2.4KΩ; 6K: 6KΩ; 10K: 10KΩ; 11K: 11KΩ; 27K: 27KΩ; 47K: 47KΩ; 54K: 54KΩ; 68K: 68KΩ; 100K: 100KΩ; 120K: 120KΩ
F	Tolerance	It Is Measured By Bridge-method At Room Temperature And Expressed By A Capital Letter. F: $\pm 1\%$; J: $\pm 5\%$ (standard)
S01	Internal Control	Letter A~Z, a~z or Digits (0~9)
XX	Special/Custom Parameters	Blank: N/A; XX: Letter A~Z, a~z or Digits (0~9) for Special/Custom Parameters

DIMENSION - Unit: mm



PRODUCT SERIES	POWER RATED WATTAGE	DIMENSION (MM)						RESISTANCE RANGE (Ω)	MAX WORKING VOLTAGE (V)
		A ± 0.3	B ± 0.3	C ± 0.3	D ± 0.3	E MAX.	F ± 0.3		
SMF	2W	4.0	6.7	1.4	3.55	7.9	1.5	10~2M	300
SMF	3W	5.0	10.5	1.7	5.0	12	2.3	10~2M	500
SMF	5W	7.3	13.5	1.7	6.8	17	2.5	10~2M	500

Note

- Max Overload Voltage is 2 times of Max Working Voltage.
- Too low or too high ohmic value can be supplied only case by case.

STANDARD ELECTRICAL SPECIFICATION

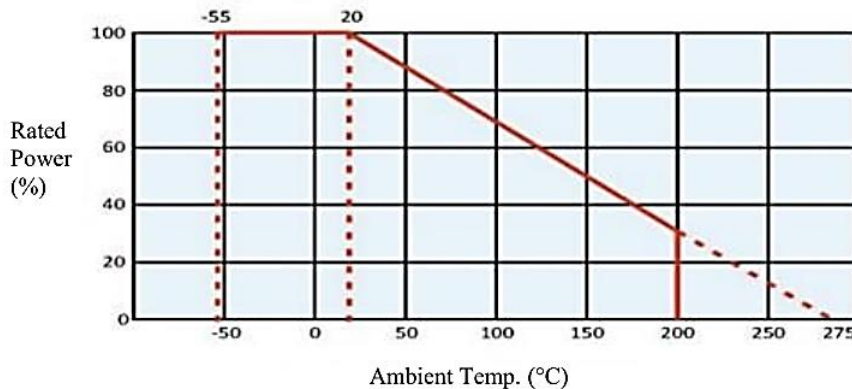
Type	Power Rating (W)	Tolerance (%)	Resistance Range (ohm)
SMF2WL560RFS01	2	±1	560

STANDARD ELECTRICAL SPECIFICATION

Parameter	Unit	Characteristics
Temperature Coefficient	ppm/°C	±100
Dielectric Withstanding Voltage	V AC	500
Operating Temperature Range	°C	-55 ~+ 200
Insulation Resistance	Ω	> 10000MΩ
Working Voltage Max.	V	300

RATED POWER

Rated power is the value of Max load power specified at the ambient temperature of 20°C, and shall meet the functions of electrical and mechanical performance. When the ambient temperature surpasses above mentioned temperature, the value declines as per following DERATING CURVE.



RATED VOLTAGE

It is calculated through the following formula:

$$E = \sqrt{P \times R}$$

where E: rated voltage (V) P: rated power (W) R: total nominal resistance (Ω)

STRUCTURE

TERMINAL: Terminal is to be firmly connected with resistors element, both electrically and mechanically, and allow easy soldering.

Coating: Flameproof UL94V0 molded package, resistant to heat, humidity & insulation.

Marking: Marking is made on the surface with Rated Wattage, Nominal Resistance and Tolerance.

OPERATING TEMPERATURE RANGE

Operating temperature range is -55°C~200°C

STORAGE CONDITIONS

The resistors with appropriate package would have a preservative duration of 1 year, under the following conditions.

T=5°C ~ 35°C H=40% ~ 75%

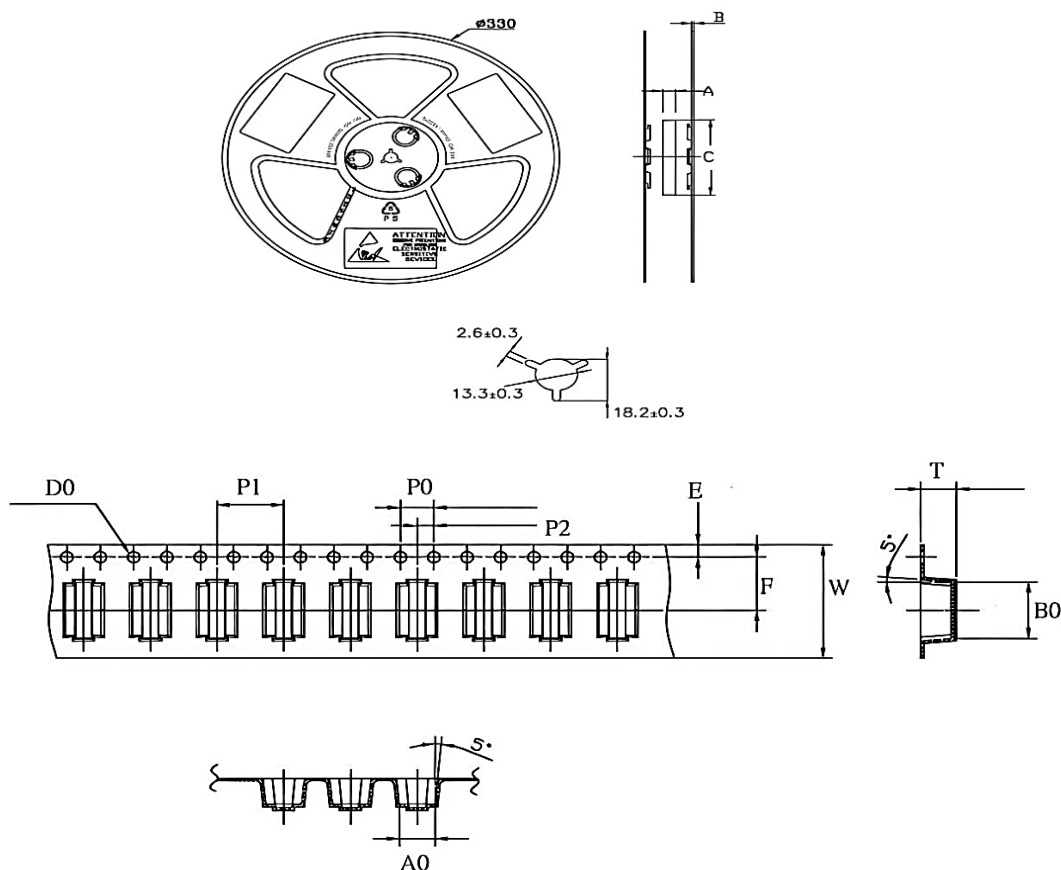
TEST AND REQUIREMENT

TEST	PROCEDURE / TEST METHOD	REQUIREMENT															
Resistance Temperature Coefficient EC 60115-1 4.8	$T.C \text{ (ppm/}^{\circ}\text{C)} = [(R2 - R1) \div R1] \times [1 \div (T2 - T1)] \times 106$ where R1: resistance value at reference temperature R2: resistance value at test temp. T1: reference temp. T2: test temp.	It shall be within $\pm 100 \text{ ppm/}^{\circ}\text{C}$.															
Temperature Cycle IEC 60115-1 4.19	Following temp. cycles are to be made 5 times and then put at room temp for one hour <table border="1"> <thead> <tr> <th>Steps.</th><th>Temperature ($^{\circ}\text{C}$)</th><th>Time (minutes)</th></tr> </thead> <tbody> <tr> <td>1</td><td>$-55^{\circ}\text{C} \pm 3^{\circ}\text{C}$</td><td>30 Minutes</td></tr> <tr> <td>2</td><td>Room temp.</td><td>3 Minutes</td></tr> <tr> <td>3</td><td>$200^{\circ}\text{C} \pm 3^{\circ}\text{C}$</td><td>30 Minutes</td></tr> <tr> <td>4</td><td>Room temp.</td><td>3 Minutes</td></tr> </tbody> </table>	Steps.	Temperature ($^{\circ}\text{C}$)	Time (minutes)	1	$-55^{\circ}\text{C} \pm 3^{\circ}\text{C}$	30 Minutes	2	Room temp.	3 Minutes	3	$200^{\circ}\text{C} \pm 3^{\circ}\text{C}$	30 Minutes	4	Room temp.	3 Minutes	The resistance value change rate between pre-and-post test shall be within $\pm 1\%$.
Steps.	Temperature ($^{\circ}\text{C}$)	Time (minutes)															
1	$-55^{\circ}\text{C} \pm 3^{\circ}\text{C}$	30 Minutes															
2	Room temp.	3 Minutes															
3	$200^{\circ}\text{C} \pm 3^{\circ}\text{C}$	30 Minutes															
4	Room temp.	3 Minutes															
Voltage Withstanding IEC 60115-1 4.7	Resistors are located in a jig and applying AC 500V for 1 minute.	The resistance should find no physical damage to the resistors, such as arc, char...etc.															
Short Time Over Load IEC 60115-14.13	When the resistors are applied 5 times as much as rated voltage for 5 seconds continuously, it shows no evidence of arc, flame...etc. Removing the voltage and place the resistors to the normal condition for 30 minutes,	The resistance value change rate between pre-and-post test shall be within 0.5%.															
Insulation Character IEC 60115-1 4.6	Resistors are located in a jig and applying DC 500V	Measuring the Insulation Resistance which shall be over 10000M Ω															
Rated Load	When the resistors are applied rated voltage for 30 minutes continuously, it shows no evidence of arc, flame...etc. Removing the voltage and place the resistors to the normal condition for 30 minutes.	The resistance value change rate between pre-and-post test shall be within $\pm 1\%$.															

TEST AND REQUIREMENT

TEST	PROCEDURE / TEST METHOD	REQUIREMENT
Load Life IEC 60115-14.25	The resistors arrayed are sent into the 70°C oven, applying rated voltage at the cycle of 1.5 hours ON, 0.5 hour OFF for 1000-+048 hours in total. Then, after removing the voltage, take the resistors out of the oven and left under normal temp. for about one hour for cooling.	The resistance value change rate between pre-and-post test shall be within $\pm 1\%$
Moisture-proof Load Life IEC 60115-14.24	The resistors arrayed are placed into a constant temp./humidity oven at the temp. of $40 \pm 2^\circ\text{C}$ and the humidity of 90 ~ 95%, then rated power is applied for 1.5 hours and cut off for 0.5 hour. The similar cycle will be repeated for 500-0 +24 hours in total (including cut-off time). Then remove the voltage, taking the resistors out of the oven and leaving them at room temp. for one hour.	The resistance value change rate between pre-and-post test shall be within $\pm 1\%$. There also shall be no evidence of remarkable change on appearance, and the marking shall not be illegible.
Solder-ability IEC 60115-1 4.17	Immerse the resistors in the solder pot at $235 \pm 5^\circ\text{C}$ for 2 seconds	At least 95% solder coverage on the termination
Resistance to Soldering Heat IEC 60115-1 4.18	Immerse the resistors in the solder pot at $270 \pm 5^\circ\text{C}$ for 10 ± 1 seconds. Then remove the resistors out of the solder pot and leaving them at room temp. for one hour for cooling.	The resistance value change rate between pre-and-post test shall be within $\pm 1\%$.

TAPE DIMENSION (Unit: mm)



Type Code	SMF2WL*****S01 (2000pcs/Reel)	SMF3WL*****S01 (1000pcs/Reel)	SMF5WL*****S01 (500pcs/Reel)
A0 +/-0.2	4.3	5.8	7.8
B0+/-0.2	8	11.8	17.5
P1+/-0.1	8	12	16
P2+/-0.1	2	2	2
P0+/-0.1	4	4	4
D0+/-0.1	1.5	1.5	1.5
E+/-0.1	1.75	1.75	1.75
F+/-0.1	7.5	11.5	14.2
W+/-0.3	16	24	32
T+/-0.1	4.15	5.8	7.5
A+/-1	16.4	24.4	32.4
B+/-0.2	2.2	2.2	2.2
C+/-1	100	100	100

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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