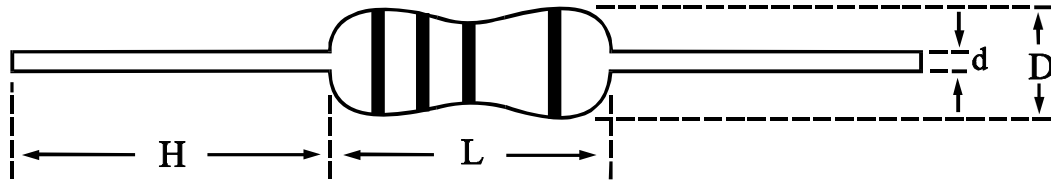


COAT-INSULATED FIXED ANTI-SURGE RESISTORS
DIMENSIONS



STYLE		DIMENSION(mm)				RESISTANCE
Normal	Miniature	L	D	H	d	RANGE
1/4W	1/2WS	6.3±0.5	2.3±0.3	28±2.0	0.55±0.03	1K~1G (±10%)
1/2W	1WS	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03	
1W	2WS	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03	1K~1M (±1%, ±2%, ±5%,)
2W	3WS	15.5±1.0	5.5±0.5	35±2.0	0.78±0.03	

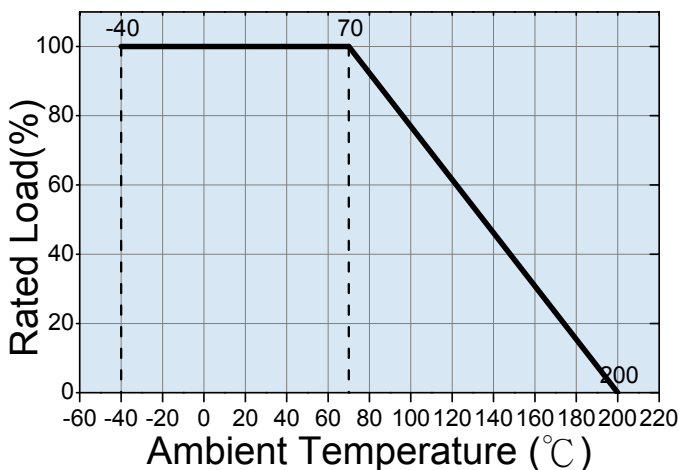
RATING

Power Rating		Max Working Vol.	Max Overload Vol.	Dielectric Withstanding Vol.	Max Anti Surge	Operating Temp. Range.
Normal	Miniature					
1/4W	1/2WS	1600V	2000V	500V	5KV	-40°C to +200°C
1/2W	1WS	2000V	2500V	500V	10KV	
1W	2WS	4000V	5000V	500V	15KV	
2W	3WS	5000V	5000V	700V	25KV	

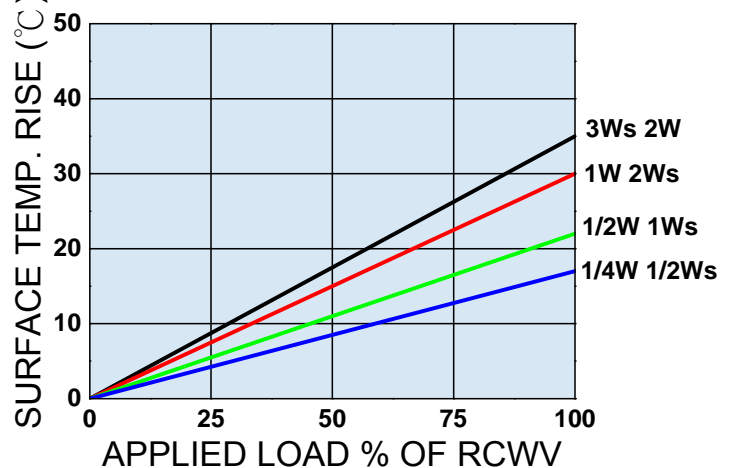
Rated continuous Working Voltage (RCWV) = $\sqrt{\text{POWER.RATING.} * \text{RESISTANCE.VALUE}}$

Resistance to anti surge : change shall be ±5% of the per-test values. 1sec. ON, 1second OFF,20,000 cycles.

●POWER GRAPH

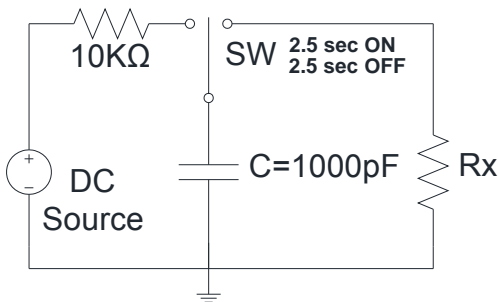


●HOT-SPOT TEMPERATURE



PERFORMANCE SPECIFICATIONS

TEST ITEMS	Test Methods	SPECIFICATIONS
Short time overload	Rated Voltage X 2.5 or Max. overload Vol., whichever is lower, for 5sec.	$\pm (1.0\% + 0.05\Omega)$
Temperature Coefficient (T.C.R.)	Resistance value at room Temperature and room Temperature+100°C	$\pm 200\text{ppm}$
Anti Surge characteristics (EN60065 TEST)	Discharge Test : 1/4W=5KV 1/2Ws=5KV 1/2W=10KV 1Ws=10KV 1W = 15KV 2Ws=15KV 2W = 25KV 3WS=36KV 1000pf capacitor Discharge Pulse 50 time. (1 pulse / 5sec. max)	$\pm (20\% + 0.05\Omega)$
Soldering heat	260°C±5°C, 10s±1s or 350°C±10°C, 3.5s±0.5s	$\pm (1.0\% + 0.05\Omega)$
Moisture resistance	40°C±2°C, 90%~95%RH, 1000h 90 min 【ON】 30 min 【OFF】	$\pm (5.0\% + 0.05\Omega)$
Terminal strength	Direct load for 10 sec. In the direction off the terminal leads.	Tensile: $\geq 2.5\text{kg}$
Load Life	SURM : 1000hours at rated voltage, 70°C 90 min 【ON】 30 min 【OFF】	$\pm (5.0\% + 0.05\Omega)$



Coating Color----- Brown

● **PART NUMBER:**

SURM	1/2W	3K	F	TB
↓	↓	↓	↓	↓
Type	Power rating	Resistance	Tolerance	Packaging
SURM	1/4W 1/2Ws 1/2W 1Ws 1W 2Ws 2W 3Ws	1K 1KΩ 10K 10KΩ 1M 1MΩ 10M 10MΩ 1G 1GΩ	F ± 1% G ± 2% J ± 5% K ± 10% M ± 20%	TB Taping Box TR Taping Reel BU Bulk F F-TYPE M M-TYPE PANA PANA