

◆ **POWER RATING:**

Small size series :1/4WS, 1/2WS, 1WS, 2WS, 3WS.

◆ **FEATURES**

- Low cost, high performance.
- High power with small size for significant space savings.
- Excellent long - term stability.
- Variety of packing - bulk, strip pack, 26mm and 52mm tape box cut and formed or radial Pane.

Figure



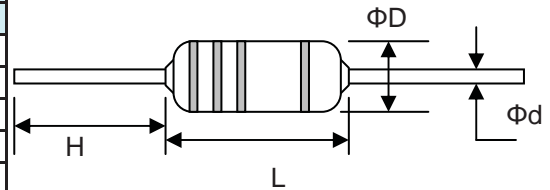
◆ **ORDERING**

Example: CRS300SFA101JT

Type	Power	T.C.R/°C	Forming	Resistance	Tolerance	Package
CRS25S	1/4WS	E=±100ppm	A=Axial	100 =10Ω	F = ±1%	T = T/Box
CRS50S	1/2WS	K=±150ppm	O=Others	101 =100Ω	G = ±2%	B = Bulk
CRS100S	1WS	F=±200ppm		102=1KΩ	J = ±5%	R = Reel
CRS200S	2WS	G=±300ppm		103=10KΩ	K = ±10%	
CRS300S	3WS	Z=±1500ppm		104=100KΩ		

◆ **EXTERNAL DIMENSIONS**

Power	Type	Dimensions (mm)			
		L	ΦD	H	Φd
1/4WS	CRS25S	3.3±0.4	1.8±0.3	29±2.0	0.45±0.03
1/2WS	CRS50S	6.3±0.5	2.3±0.3	29±2.0	0.55±0.03
1WS	CRS100S	9.0±0.5	3.2±0.5	26±2.0	0.65±0.03
2WS	CRS200S	11.5±1.0	4.5±0.5	35±2.0	0.78±0.03
3WS	CRS300S	15.5±1.0	5.0±0.5	32±2.0	0.78±0.03



* The type designation shall be in the following form and as specified.

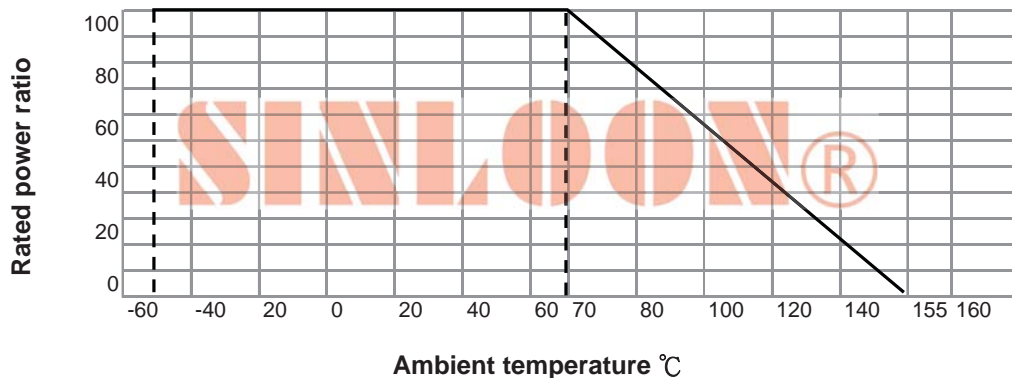
◆ **RATED POWER**

Type	Power 70°C	Maximum Voltage		Dielectric withstanding Voltage (AC)	Resistance Range
		Working	Overload		
CRS25S	1/4WS	200V	400V	300V	1Ω ~ 1M Ω
CRS50S	1/2WS	250V	600V	500V	1Ω ~ 1M Ω
CRS100S	1WS	350V	700V	700V	1Ω ~ 1M Ω
CRS200S	2WS	500V	1000V	1000V	1Ω ~ 1M Ω
CRS300S	3WS	500V	1000V	1000V	1Ω ~ 1M Ω

Operating temperature Range: -55°C ~ 155°C

* Rated power is maximum power which can continuously loaded at specified ambient temerrmined 70°C, however when the ambient temperure exveeds 70°C, rated power should be determined from the derating curve of Fig 1.

◆ **POWER DERATING CURVE**



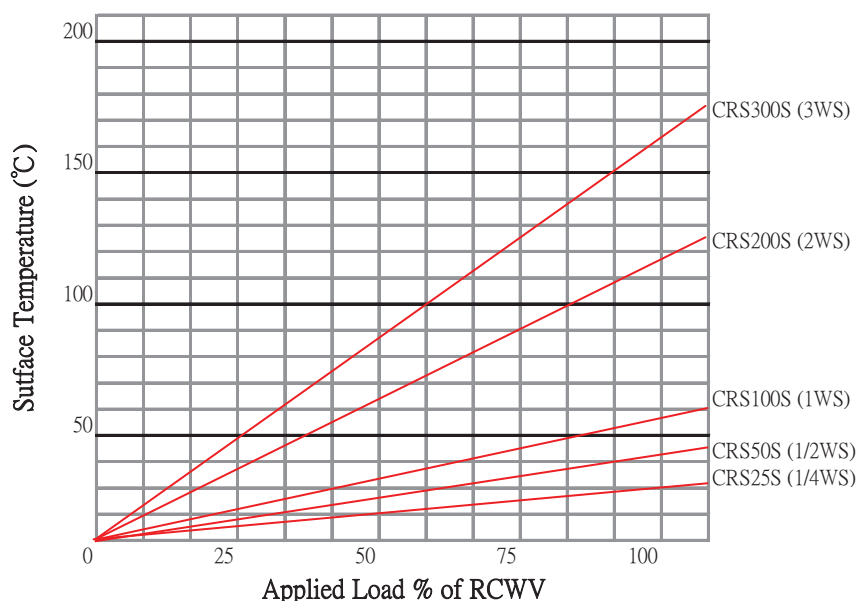
◆ PERFORMANCE SPECIFICATIONS

PERFORMANCE TEST	TEST METHOD	APPRAISE
Short Time Overload	JIS-C-5202 5.5 : 2.5 times RCWV for 5 seconds	±(0.75%+0.05)Ω
Dielectric Withstanding V.	JIS-C-5202 5.7 : in V-Block for 60 seconds	By Type
Temperature Coefficient	JIS-C-5202 5.2 : -55°C ~+155°C	By Type
Insulation Resistance	JIS-C-5202 5.6 : in V-Block	≥ 1000 MΩ
Solderability	JIS-C-5202 6.5 : 230°C for 5±0.5 seconds	95% min. coverage
Resistance to Solvent	JIS-C-5202 6.9 : Trichroethance for 1 min. with	no deterioration
Terminal Strength	Direct load for 10 sec. In the direction of the terminal	≥ 2.5KG/24.5N
Pulse Overload	JIS-C-5202 5.8 : 4 time RCWV 10000 cycles(1 sec.on,	±(2%+0.05)Ω
Load Life in Humidity	JIS-C-5202 7.9 : 40±2°C, 90~95% RH at RCWV for (1.5hrs. on, 0.5 hrs. off)	±(3%+0.05)Ω
Load Life	JIS-C-5202 7.10 : 70°C at RCWV for 1000hrs	±(3%+0.05)Ω
Temperature Cycling		±(1%+0.05)Ω
Soldering Heat		±(1%+0.05)Ω

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

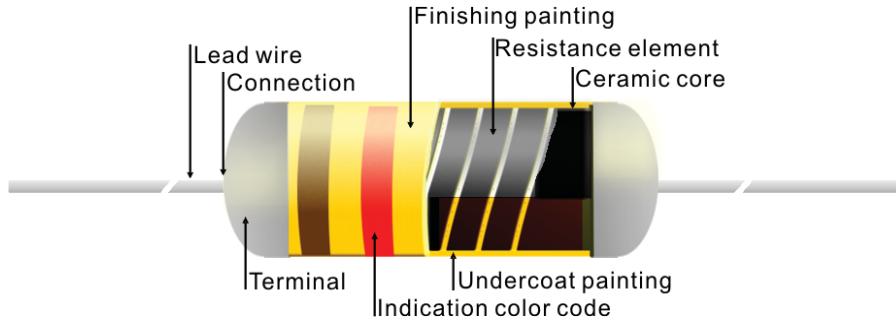
HOT-SPOT TEMPERATURE

Fig 2. Ambient Temperature (°C)



◆ **STRUCTURE DIAGRAM**

The construction of resistor (CRS Series) shall be Figure.



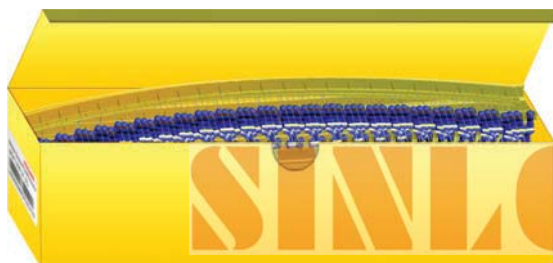
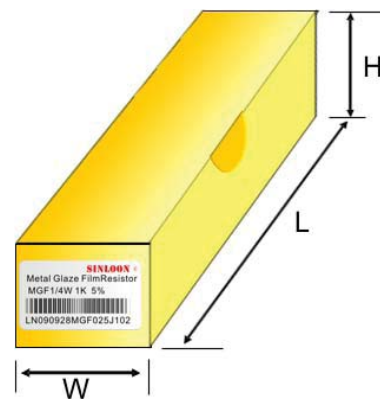
Item	Material
Ceramic Core	High alumina ceramic is used
Resistance element	The resistor element shall consist of metal glaze film.
Terminal	Tinned iron cap.
Connection	The lead wire, Which is olated with solder, shall be mounted to the caps by welding process.
Lead Wire	Soldered or tinned annealed copper wire.
Undercoat Painting	Electric insulation varnish.
Finishing painting	Epoxy resin is used.
Indiction	Color code.

◆ **Painting Resistor body color**

(1)	CRS series	
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◆ **PACKAGE:**

STYLE Miniature	Power	DIMENSION			TYPE Quantity
		W (mm)	H (mm)	L (mm)	
CRS25S	1/4WS	80	75	264	5,000
CRS50S	1/2WS	80	105	264	5,000
CRS100S	1WS	80	46	264	1,000
CRS200S	2WS	103	82	265	1,000
CRS300S	3WS	103	96	265	1,000



小型化碳膜電阻器

CRS Series

Power Range: 1/4WS ~ 3WS

Miniature Style Carbon Film Resistors

Standard Resistor Color Code (4 band code)

Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Gray	White	Gold	Silver
1st digit	0	1	2	3	4	5	6	7	8	9		
2nd digit	0	1	2	3	4	5	6	7	8	9		
Multiplier	$\times 10^0$	$\times 10^1$	$\times 10^2$	$\times 10^3$	$\times 10^4$	$\times 10^5$	$\times 10^6$	$\times 10^7$	$\times 10^8$	$\times 10^9$		
Tolerance		$\pm 1\%$ (F)	$\pm 2\%$ (G)			$\pm 0.5\%$ (D)	$\pm 0.25\%$ (C)	$\pm 0.1\%$ (B)			$\pm 5\%$ (J)	$\pm 10\%$ (K)

Examples:

Fig-1: (E24) Resistor 560R 5%

Tolerance $\pm 5\%$
(3rd) Brown $\times 10$
(2nd) Blue digit 6
(1st) Green digit 5

Green, Blue, brown, silver tolerance band:
 $56 \times 10 = 560$ ohms (560 ohms), with a tolerance of 5%

Fig-2: (E24) Resistor 5.6K 10%

Tolerance $\pm 10\%$
(3rd) Red $\times 100$
(2nd) Blue digit 6
(1st) Green digit 5

Green, blue, red, with silver tolerance band:
 $56 \times 100 = 5.6$ kohms, with a tolerance of 10%

Standard EIA Decade Resistor Value E24 series: (5% tolerance)
10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91

Standard Resistor Color Code (5 band code)

Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Gray	White	Gold	Silver
1st digit	0	1	2	3	4	5	6	7	8	9		
2nd digit	0	1	2	3	4	5	6	7	8	9		
3rd digit	0	1	2	3	4	5	6	7	8	9		
Multiplier	$\times 10^0$	$\times 10^1$	$\times 10^2$	$\times 10^3$	$\times 10^4$	$\times 10^5$	$\times 10^6$	$\times 10^7$	$\times 10^8$	$\times 10^9$		
Tolerance		$\pm 1\%$ (F)	$\pm 2\%$ (G)			$\pm 0.5\%$ (D)	$\pm 0.25\%$ (C)	$\pm 0.1\%$ (B)			$\pm 5\%$ (J)	$\pm 10\%$ (K)

Examples:

Fig-3: (E96) Resistor 280R $\pm 1\%$

Tolerance: $\pm 1\%$
Multiplier: $\times 1$
(3rd) digit 0
(2nd) digit 8
(1st) digit 2

Red, Gray, Black, Black, Brown tolerance band:
 $280 \times 1 = 280$ ohms (280 ohms), with a tolerance of 1%

Fig-4: (E96) Resistor 39.1K $\pm 5\%$

Tolerance: $\pm 5\%$
Multiplier: $\times 100$
(3rd) digit 1
(2nd) digit 9
(1st) digit 3

Orange, White, Brown, Red, Gold tolerance band:
 $390 \times 100 = 39.1$ K ohms (39.1K ohms),
with a tolerance of 5%

E96 series: (1% tolerance)
100, 102, 105, 107, 110, 113, 115, 118, 121, 124, 127, 130, 133, 137, 140, 143, 147, 150, 154, 158, 162, 165, 169, 174, 178, 182, 187, 191, 196, 200, 205, 210, 215, 221, 226, 232, 237, 243, 249, 255, 261, 267, 274, 280, 287, 294, 301, 309, 316, 324, 332, 340, 348, 357, 365, 374, 383, 392, 402, 412, 422, 432, 442, 453, 464, 475, 487, 491, 511, 523, 536, 549, 562, 576, 590, 604, 619, 634, 649, 665, 681, 698, 715, 732, 750, 768, 787, 806, 825, 845, 866, 887, 909, 931, 959, 976

※美隆電子產品規格特性參數的改變或更新,將不會另行通知。
※Mayloon characteristic parameters of electronic product specification changes or updates without prior notice.

