

- Features:
- High power metal alloy current sense resistor
  - Molded package for superior heat dissipation
  - Typical inductance <5nH
  - Ideal for power supplies and motor drives



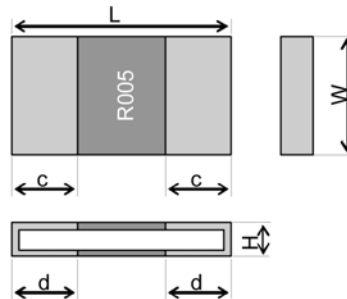
Electrical Specifications					
Type / Code	Power Rating (Watt)	Maximum Working Voltage	Rated Voltage	Resistance Temperature Coefficient	Ohmic Range ( $\Omega$ ) and Tolerance
CSM0603	0.33W	$(P \cdot R)^{1/2}$	$V = \sqrt{P \cdot R}$	$\pm 100$ ppm/ $^{\circ}\text{C}$	1%, 5% 0.01
CSM2512	3W	$(P \cdot R)^{1/2}$	$V = \sqrt{P \cdot R}$	$\pm 75$ ppm/ $^{\circ}\text{C}$	0.002 - 0.1

Operation Temperature Range:  $-55^{\circ}\text{C} \sim +170^{\circ}\text{C}$

V=Rated Voltage (V)

P=Rated Power (W)

R=Resistance Value ( $\Omega$ )

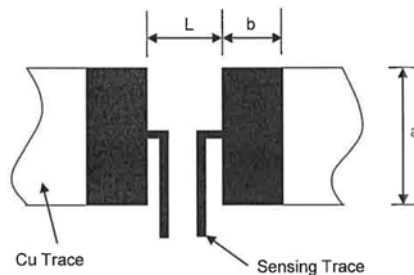
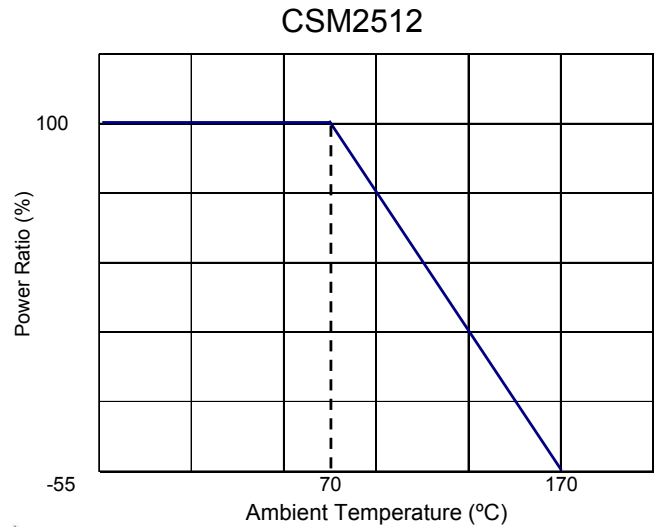
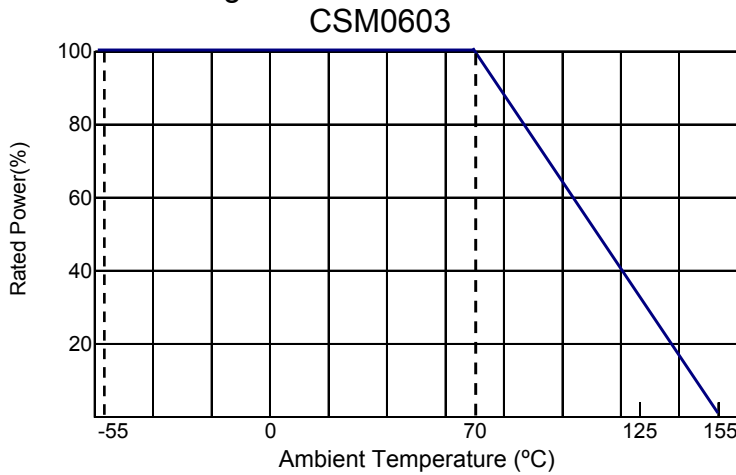


Mechanical Specifications						
Type / Code	L	W	C	H	d	Unit
CSM0603	$0.063 \pm 0.004$	$0.031 \pm 0.004$	$0.008 \pm 0.004$	$0.012 \pm 0.004$	$0.012 \pm 0.004$	inches
	$1.60 \pm 0.10$	$0.80 \pm 0.10$	$0.20 \pm 0.10$	$0.30 \pm 0.10$	$0.30 \pm 0.10$	mm
CSM2512	$0.252 \pm 0.008$	$0.126 \pm 0.008$	$0.035 \pm 0.008$	$0.028 \pm 0.008$	$0.035 \pm 0.008$	inches
	$6.40 \pm 0.20$	$3.20 \pm 0.20$	$0.90 \pm 0.20$	$0.70 \pm 0.20$	$0.90 \pm 0.20$	mm

## How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13
C	S	M	2	5	1	2	F	T	1	0	L	0
Product Series		Size	Power	Tolerance		Packaging			Resistance Value			
CSM	Molded Metal Plate Sensing Resistor	0603	0.33W	Code	Tol	Code	Description	Size	Quantity	Four characters with the multiplier used as the decimal holder. "L" used as multiplier of $10^3$ for any value under 0.1 ohm		
		2512	3W	F	1%	T	Paper Tape	0603	5,000			
				J	5%		Emboss	2512	4,000	0.002 = 2L00 0.01 = 10L0 0.1 ohm = R100		

Power Derating Curve:



Solder Pad Dimensions				
Type / Code	a	b	L	Unit
CSM0603	0.039	0.028	0.035	inches
	1.00	0.70	0.90	mm
CSM2512	0.157	0.083	0.161	inches
	4.00	2.10	4.10	mm

Performance Characteristics		
Test Items	Condition of Test	Test Limits
Temperature Coefficient of Resistance	+25°C ~ +125°C	±75 ppm/°C
Load Life	1000 hours at rated power, 70°C, 1.5 hours ON, 0.5 hours OFF	±1%
Short Time Overload	5 X rated power for 5 seconds	±0.5% (for 0.04 - 0.1Ω > rated power x 2.5 for 5 seconds)
Moisture No Load	85°C, 85% RH, 1000 hours	±0.5%
Temperature Cycle	-55°C and +155°C, 300 cycles, 15 minutes per extreme condition	±0.5%
Resistance to Soldering Heat	260±5°C for 20±1 seconds	±0.5%
Solderability	245±5°C for 2±0.5 seconds	At least 95% of surface area of electrode must be covered with new solder
High Temperature Exposure	170°C for 1000 hours	±0.5%
Low Temperature Storage	-55°C for 1000 hours	±0.5%
Substrate Bending	Bending width 2mm	±1%
Insulation Resistance	100V DC for 1 minute	> 100MΩ

Storage Conditions: temperature 5°C ~ 35°C; humidity 40% ~ 75%.