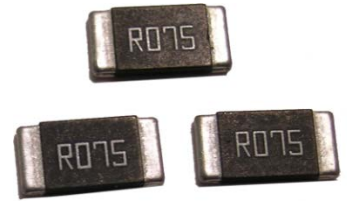
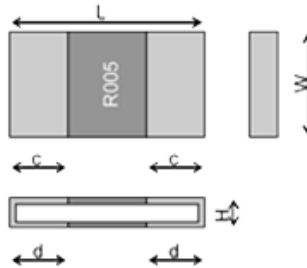


- Features:
- High power metal alloy current sense resistor
  - Molded package for superior heat dissipation
  - Typical inductance <5nH
  - Ideal for power supplies and motor drives



Electrical Specifications					
Type / Code	Power Rating (Watt)	Maximum Working Voltage	Maximum Current (A)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance
					1%, 5%
CSM0603	0.33W	$(P \cdot R)^{1/2}$	5.6A	±100 ppm/°C	0.01
CSM2512	3W	$(P \cdot R)^{1/2}$	37.8A	±75 ppm/°C	0.002 - 0.1

Operation Temperature Range: CSM0603 = -55°C ~ +155°C; CSM2512 = -55°C ~ +170°C  
 P=Rated Power (W)  
 R=Resistance Value (Ω)



Mechanical Specifications						
Type / Code	L	W	C	H	d	Unit
CSM0603	0.063 ± 0.004	0.031 ± 0.004	0.008 ± 0.004	0.012 ± 0.004	0.012 ± 0.004	inches
	1.60 ± 0.10	0.80 ± 0.10	0.20 ± 0.10	0.30 ± 0.10	0.30 ± 0.10	mm
CSM2512 (0.002Ω - 0.004Ω)	0.252 ± 0.008	0.126 ± 0.008	0.079 ± 0.008	0.028 ± 0.008	0.079 ± 0.008	inches
	6.40 ± 0.20	3.20 ± 0.20	2.00 ± 0.20	0.70 ± 0.20	2.00 ± 0.20	mm
CSM2512 (>0.004Ω - 0.1Ω)	0.252 ± 0.008	0.126 ± 0.008	0.035 ± 0.008	0.028 ± 0.008	0.035 ± 0.008	inches
	6.40 ± 0.20	3.20 ± 0.20	0.90 ± 0.20	0.70 ± 0.20	0.90 ± 0.20	mm

**How to Order**

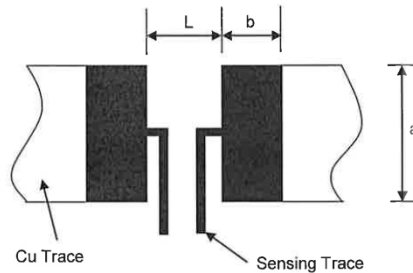
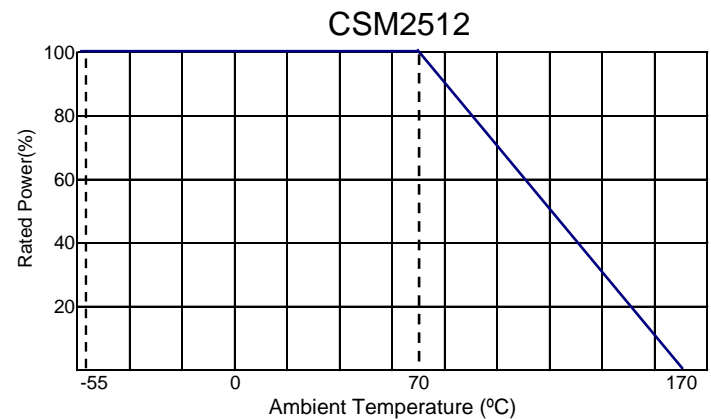
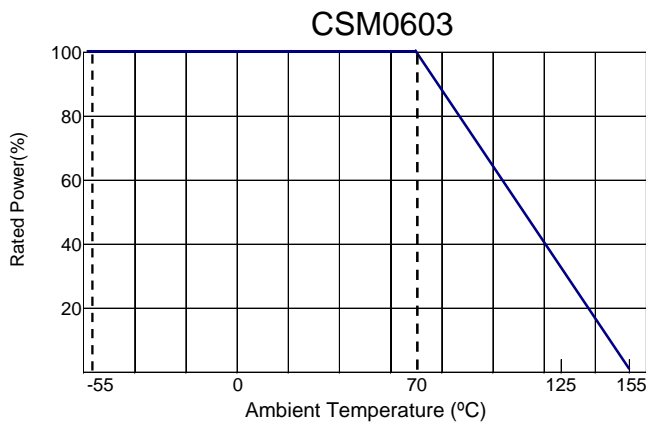
1	2	3	4	5	6	7	8	9	10	11	12	13
C	S	M	2	5	1	2	F	T	1	0	L	0

Product Series		Size	Power	Tolerance		Packaging				Resistance Value
CSM	Molded Metal Plate Sensing Resistor	0603	0.33W	Code	Tol	T	Description	Size	Quantity	Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10 <sup>3</sup> for any value under 0.1 ohm 0.002 = 2L00 0.01 = 10L0 0.1 ohm = R100
		2512	3W	F	1%					
J	5%	Emboss	2512	4,000						

Performance Characteristics		
Test Items	Condition of Test	Test Limits
Temperature Coefficient of Resistance	+25°C ~ +125°C	CSM2512 $\pm 75$ ppm/°C CSM0603 $\pm 100$ ppm/°C
Load Life	1000 hours at rated power, 70°C, 1.5 hours ON, 0.5 hours OFF	$\pm 1\%$
Short Time Overload	5 X rated power for 5 seconds	$\pm 0.5\%$ (for 0.04 - 0.1Ω > rated power x 2.5 for 5 seconds)
Moisture No Load	85°C, 85% RH, 1000 hours	$\pm 0.5\%$
Temperature Cycle	-55°C and +155°C, 300 cycles, 15 minutes per extreme condition	$\pm 0.5\%$
Resistance to Soldering Heat	260 $\pm 5$ °C for 20 $\pm 1$ seconds	$\pm 0.5\%$
Solderability	245 $\pm 5$ °C for 2 $\pm 0.5$ seconds	At least 95% of surface area of electrode must be covered with new solder
High Temperature Exposure	170°C for 1000 hours	$\pm 0.5\%$
Low Temperature Storage	-55°C for 1000 hours	$\pm 0.5\%$
Substrate Bending	Bending width 2mm	$\pm 1\%$
Insulation Resistance	100V DC for 1 minute	> 100MΩ

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

**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