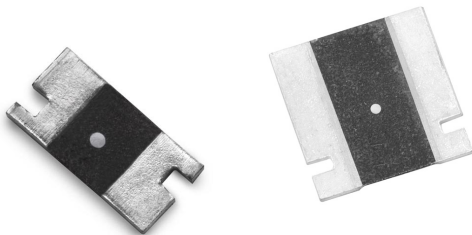


## Bulk Metal<sup>®</sup> Technology High Precision, Current Sensing, Power Surface Mount, Metal Strip Resistor



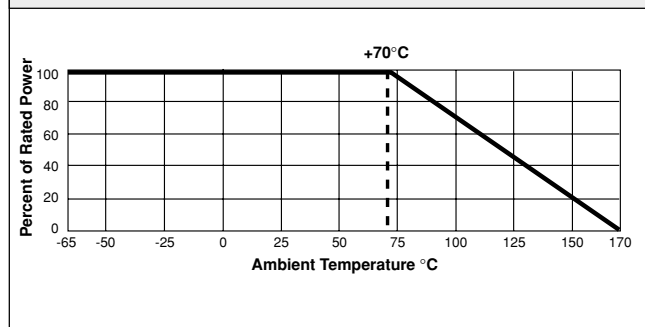
Product may not  
be to scale

The CSM Series of low value current sense resistors provides power and precision in a four terminal, surface mount configuration. Its all welded construction is made up of a Bulk Metal<sup>®</sup> resistive element with 60/40 tin/lead plated copper terminations. It is suitable for all types of precision current sensing, voltage division, and pulse applications including switching and linear power supplies, instruments, and power amplifiers.

### FEATURES

- Low ohmic values: 2mΩ to 200mΩ
- Low temperature coefficient: ± 15ppm/°C (3mΩ up)
- Precision tolerances: down to 0.1%
- Four terminal (Kelvin) design: allows for precision accurate measurements
- Surface mount configuration
- Power Rating: 1 to 3 watts

**FIGURE 1 - POWER DERATING CURVE**

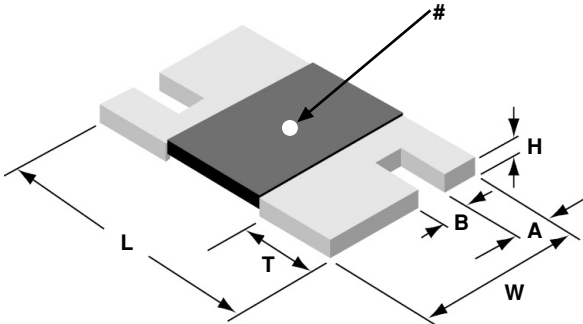


**TABLE 1 - PERFORMANCE SPECIFICATIONS**

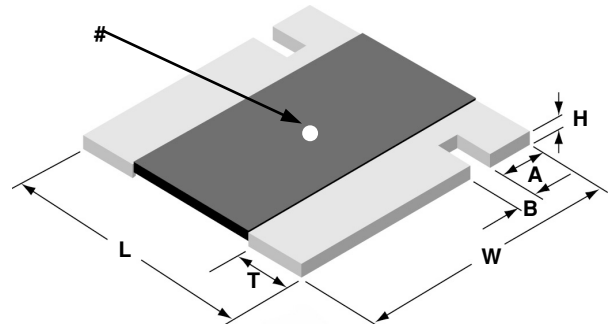
PARAMETER	CSM2512	CSM3637
Resistance Range	3mΩ - 200mΩ	2mΩ - 200mΩ
Power Rating at 70°C	1 watt	3 watts (2mΩ - 10mΩ) 2 watts (> 10mΩ - 200mΩ)
Tightest Tolerance	± (0.1% + 0.01mΩ)	
Temperature Coefficient (- 55°C to + 125°C)	± 15ppm/°C	± 25ppm/°C (2mΩ - < 3mΩ) ± 15ppm/°C (3mΩ - 200mΩ)
Operating Temperature Range	-55°C to + 125°C; ref. + 25°C	
Weight (maximum)	0.09 grams	0.29 grams

**FIGURE 2 - DIMENSIONS AND IMPRINTING** in inches (millimeters)

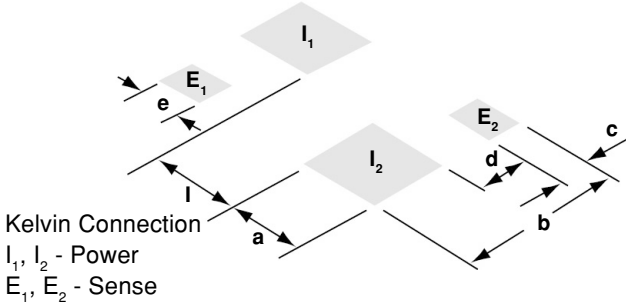
**CSM2512 DIMENSIONS**



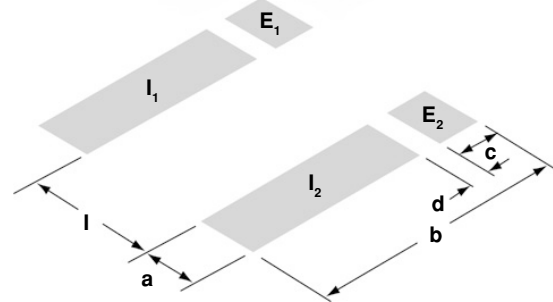
**CSM3637 DIMENSIONS**



**CSM2512 LAND PATTERN**



**CSM3637 LAND PATTERN**



**DIMENSIONS - TOLERANCES ± 0.010 (± 0.254), \* ± 0.015 (± 0.381)**

MODEL	RESISTANCE RANGE, mΩ	L	W	H	T	A	B
CSM2512	3 to < 5	0.25 (6.35)	0.125 (3.175)	0.025 (0.635)	0.083 (2.108)	0.030* (0.762)	0.025* (0.635)
	5 to < 7				0.047 (1.194)		
	7 to 200				0.032 (0.813)		
CSM3637	2 to 200	0.360 (9.14)	0.370 (9.4)	0.025 (0.635)	0.086 (2.18)	0.061 (1.55)	0.032 (0.813)

**LAND PATTERN DIMENSIONS - TOLERANCES ± 0.003 (± 0.076)**

MODEL	a	b	c	d	e	I
CSM2512	0.125 (3.18)	0.130 (3.30)	0.030 (0.76)	0.020 (0.51)	0.055 (1.40)	0.065 (1.65)
CSM3637	0.116 (2.95)	0.366 (9.30)	0.066 (1.68)	0.024 (0.61)	-	0.178 (4.52)

#White dot indicates top side of part for mounting purposes.

**TABLE 2 - ORDERING INFORMATION**

MODEL	RESISTANCE VALUE	LETTER DESIGNATOR*	TOLERANCE	PACKAGING
CSM 2512	3mΩ - 200mΩ	R	B = ± 0.1% C = ± 0.25%	W = Waffle Pack
CSM 3637	2mΩ - 200mΩ		D = ± 0.5% F = ± 1.0%	T = Tape and Reel

\*Resistance Value in ohms, is expressed by a series of 6 characters, 5 of which represent significant digits while the 6th letter designates the location of the comma or decimal. Example 0R0100 = 0.010Ω