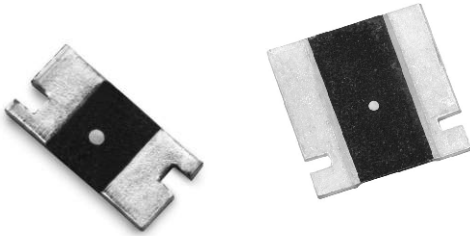


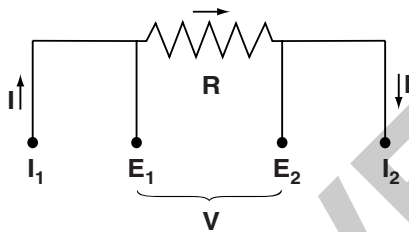
# Bulk Metal<sup>®</sup> Technology High Precision, Current Sensing, Power Surface Mount, Metal Strip Resistor with Resistance Value from 2 mΩ, Rated Power up to 3 W and TCR to 0 ± 15 ppm/°C



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 plated copper terminations.

Our application engineering department is available to advise and make recommendations.

For non-standard technical requirements and special applications, please contact us.



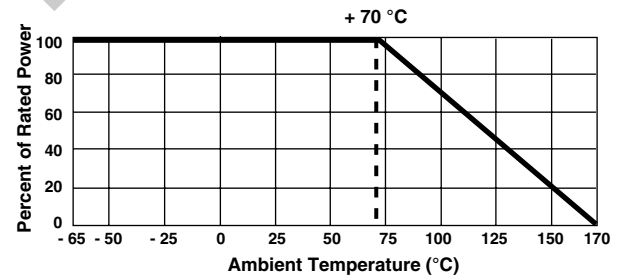
## FEATURES

- Temperature coefficient: ± 15 ppm/°C max. (- 55 °C to + 125 °C, + 25 °C ref.) (see table 1)
- Power rating: 1 to 3 W
- Tolerance: ± 0.1 %
- Resistance range: 2 mΩ to 200 mΩ
- Vishay Foil resistors are not restricted to standard values, we can supply specific “as required” values at no extra cost or delivery (e.g. 2.3456 mΩ vs. 2 mΩ)
- Short time overload: ± 0.1 % typical
- Thermal EMF: 3 μV/°C
- Maximum current: up to 38 A
- Surface mount configuration
- Four terminal (Kelvin) design: allows for precision accurate measurements
- Terminal finish: lead (Pb)-free, tin/lead alloy
- Prototype samples available from 72 h. For more information, please contact [foil@vishay.com](mailto:foil@vishay.com)
- For better performance please contact us



**RoHS\***  
COMPLIANT

**FIGURE 1 - POWER DERATING CURVE**



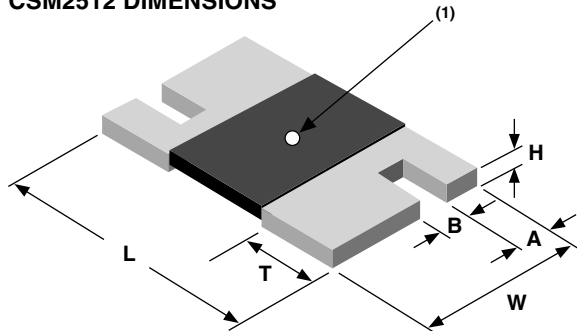
**TABLE 1 - SPECIFICATIONS**

PARAMETER	CSM2512	CSM3637
Resistance Range	3 mΩ to 200 mΩ	2 mΩ to 200 mΩ
Power Rating at 70 °C	1 W	3 W ( 2 mΩ to 10 mΩ) 2 W (> 10 mΩ to 200 mΩ)
Maximum Current	18 A	38 A
Tightest Tolerance	± 0.1 %	
Temperature Coefficient Max. (- 55 °C to + 125 °C, + 25 °C Ref.)	± 15 ppm/°C	± 25 ppm/°C (2 mΩ to < 3 mΩ) ± 15 ppm/°C (3 mΩ to 200 mΩ)
Operating Temperature Range	- 55 °C to + 125 °C, ref. + 25 °C	
Weight (maximum)	0.09 g	0.29 g

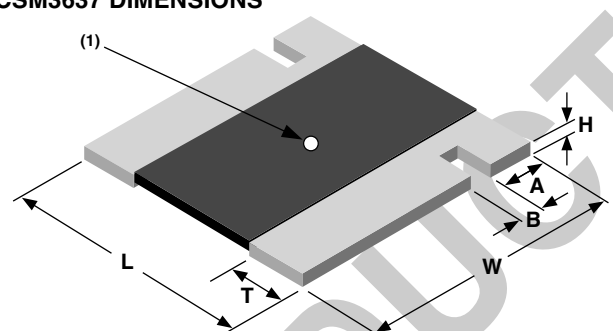
\* Pb containing terminations are not RoHS compliant, exemptions may apply

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

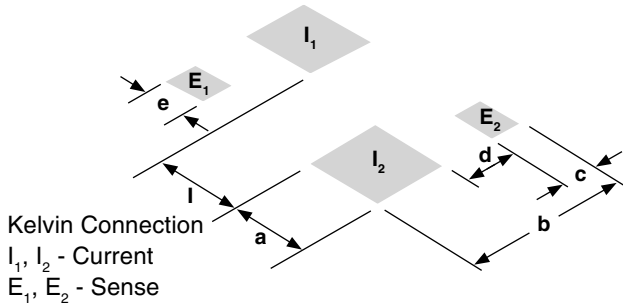
**CSM2512 DIMENSIONS**



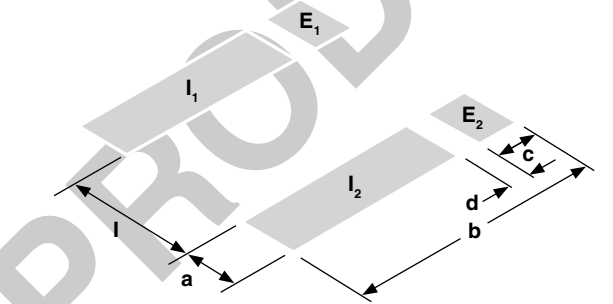
**CSM3637 DIMENSIONS**



**CSM2512 LAND PATTERN**



**CSM3637 LAND PATTERN**



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

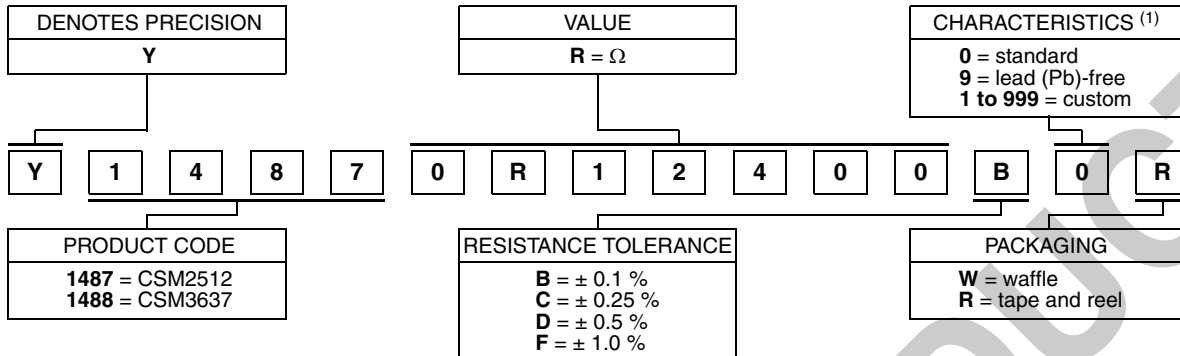
MODEL	RESISTANCE RANGE (m $\Omega$ )	L	W	H	T	A	B
CSM2512	3 to < 5	0.250 (6.350)	0.125 (3.175)	0.025 (0.635)	0.083 (2.108)	0.030 (0.762)*	0.032 (0.813)*
	5 to < 7				0.047 (1.194)		
	7 to 200				0.032 (0.813)		
CSM3637	2 to 200	0.360 (9.144)	0.370 (9.398)	0.025 (0.635)	0.086 (2.184)	0.061 (1.549)	0.032 (0.813)

**LAND PATTERN DIMENSIONS - TOLERANCES  $\pm 0.003$  ( $\pm 0.076$ )**

MODEL	RANGE	a	b	c	d	e	l
CSM2512	0R001 to 0R0049	0.120 (3.04)	0.145 (3.68)	0.045 (1.14)	0.021 (0.53)	0.055 (1.39)	0.050 (1.27)
	0R005 to 0R0069	0.083 (2.10)	0.145 (3.68)	0.045 (1.14)	0.021 (0.53)	0.055 (1.39)	0.125 (3.17)
	0R007 to 0R5	0.065 (1.65)	0.145 (3.68)	0.045 (1.14)	0.021 (0.53)	0.055 (1.39)	0.160 (4.06)
CSM3637	0R002 to 0R2	0.130 (3.30)	0.364 (9.24)	0.052 (1.32)	0.031 (0.78)	-	0.186 (4.72)

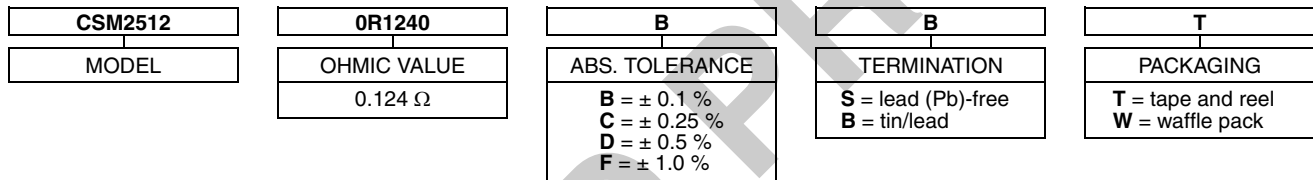
**Note**

(1) White dot indicates top side of part for mounting purposes.

**TABLE 2 - GLOBAL PART NUMBER INFORMATION**
**NEW GLOBAL PART NUMBER: Y14870R12400B0R (preferred part number format)**


FOR EXAMPLE: ABOVE GLOBAL ORDER Y1487 0R12400 B 0 R:

 TYPE: CSM2512  
 VALUE: 124.0 m $\Omega$   
 ABSOLUTE TOLERANCE:  $\pm 0.1\%$   
 TERMINATION: standard tin/lead  
 PACKAGING: tape and reel

**HISTORICAL PART NUMBER: CSM2512 0R1240 B B T (will continue to be used)**

**Note**
<sup>(1)</sup> For non-standard requests, please contact application engineering.



## Disclaimer

All product specifications and data are subject to change without notice.

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