CLS Series

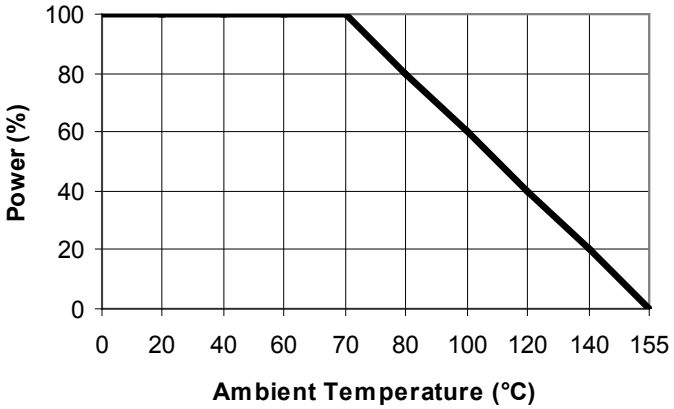
Current Sensing Chip Resistor

- **Resistances from 0.01 to 1Ohms**
- **Power Rating to 2 Watt**
- **Resistance Tolerances to ± 1%**
- **TCR's to ±100 ppm/°C**
- **Alumina Substrate for High Power Dissipation**
- **Sizes: 0402 / 0603 / 0805 / 1206 / 2010 / 2512**

SPECIFICATIONS

Type	CLS0402	CLS0603	CLS0805	CLS1206	CLS2010	CLS2512
Standard Power Rating (W)	0.0625	0.1	0.125	0.25	0.75	1.0
"High" Power Rating (W)	0.125		0.25	0.5	1.0	2.0
Standard Resistance Range (Ω)	0.05 to 1.0	0.02 to 1.0		0.01 to 1.0		
"High" Resistance Range (Ω)	0.051 to 1.0			0.01 to 1.0		
Temperature Coefficient (depending on ohmic value)	±200 to ±400 ppm	±200 to ±600 ppm ±100 ppm upon request				
"High" Temperature Coefficient (depending on ohmic value)	±200 to ±400 ppm			±200 to ±600 ppm ±100 ppm upon request		
Tolerances	1% / 2% / 5%					
Operating Temperature range	-55 to +155°C					
Dimensions (LxW) mm [inches]	1.00 x 0.50 [0.04 x 0.02]	1.60 x 0.80 [0.06 x 0.03]	2.00 x 1.25 [0.08 x 0.05]	3.10 x 1.55 [0.12 x 0.06]	5.00 x 2.50 [0.20 x 0.10]	6.30 x 3.10 [0.25 x 0.12]
Packaging (pcs) Tape and Reel	10,000	5,000			4,000	

Power Derating Curve



Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR - Packaging - High/Standard Rating
Example: CLS 2512 0.500Ohms 1% 100ppm HP
(Note: If no TCR is specified the highest value will be supplied. Standard Rating will be given if not specified)

Environmental Characteristics

Test	Requirement	Test Method
Temperature Coefficient of Resistance	As Spec.	-55C to 125°C, 25°C reference temperature
Short Time Overload	±0.5%+0.05Ω	RCWV*2.5 or Max. overload voltage for 5 seconds
Insulation Resistance	≥10G	Max. overload voltage for 1 minute
Load Life	±1.0%+0.05Ω	70±2°C, Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Damp Heat with Load	±0.5%+0.05Ω	40±2°C, 90~95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Dry Heat	±0.5%+0.05Ω	at +155°C for 1000 hrs
Bending Strength	As Spec.	Bending once for 5 seconds 2010, 2512 sizes: 2mm Other sizes: 3mm
Solderability	95% min. coverage	245±5°C for 3 seconds
Resistance to Soldering Heat	±0.5%+0.05Ω	260±5°C for 10 seconds
Voltage Proof	No breakdown or flashover	1.42 times RCWV (RMS) for 1 minute
Leaching	Individual leaching area ≤5% Total leaching area ≤10%	260±5°C for 30 seconds
Rapid Change of Temperature	±0.5%+0.05Ω	-55°C to +155°C, 5 cycles