Features:

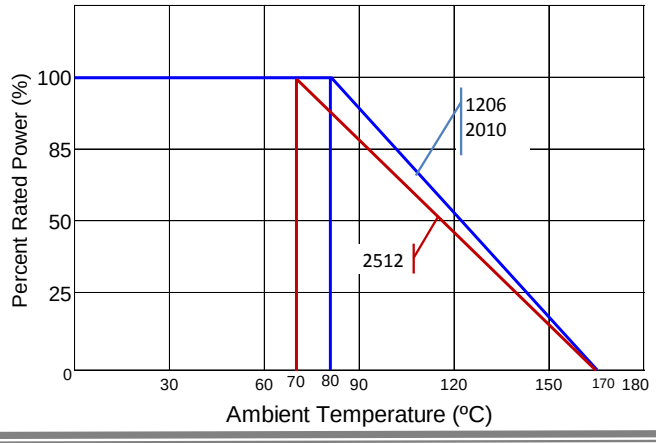
- High power current sense resistor
- TCR of ±50 ppm/°C
- Resistances down to 0.0005 (1/2 mΩ)
- Current handling up to 63 amps
- Non-standard resistance values available
- RoHS compliant / lead-free

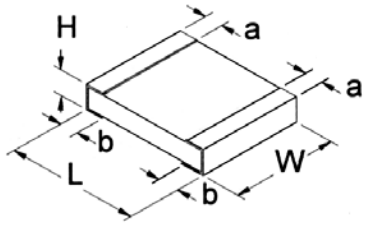
Electrical Specifications					
Type / Code	Old Pkg Code	Power Rating (Watts)	Dielectric Withstanding Voltage	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance
					1%, 5%
CSNL1206	1/2	1W @ 80ºC	200V	±50 ppm/ºC	0.001 - 0.05
CSNL2010	1	1.5W @ 80ºC	200V	±50 ppm/ºC	0.0005 - 0.1
CSNL2512	2	2W @ 70ºC	200V	±50 ppm/ºC	0.0005 - 0.01

Performance Characteristics			
Test	Test Method	Test Specification	Typical
Load Life	MIL-STD-502F-Method 108A RCWV at 70°C; 1.5h ON; 0.5h OFF Total 1024 ± 24h	± 1%	≤ 0.5%
Resistance to Soldering Heat	MIL-STD-202F-Method 210E 260 ± 5°C for 10 ± 1s	± 0.5%	≤ 0.25%
Solderability	MIL-STD-202F-Method 208H 245 ± 5°C for 2 ± 0.5s	minimum 95% coverage	> 95%
Thermal Shock	MIL-STD-202F-Method 107G -55°C to 150°C, 100 cycles	± 0.5%	≤ 0.5%
Short Time Overload	JIS-C-5202-5.5 5x rated power for 5s	± 0.5%	≤ 0.5%
Temperature Cycling	JIS-C-5202-7.4 -55°C: 30 min. 25°C: 2 to 3 min. 155°C: 30min. 25°C: 2 to 3 min.	± 0.5%	≤ 0.5%
Moisture Resistance	MIL- STD-202F-Method 106G	± 0.5%	≤ 0.5%
Insulation Resistance	MIL-STD-202F-Method 302 Apply 100Vdc for 1 minute	1MΩ minimum	≥ 1MΩ
Leach Resistance	-	90 seconds minimum	≥ 90 seconds

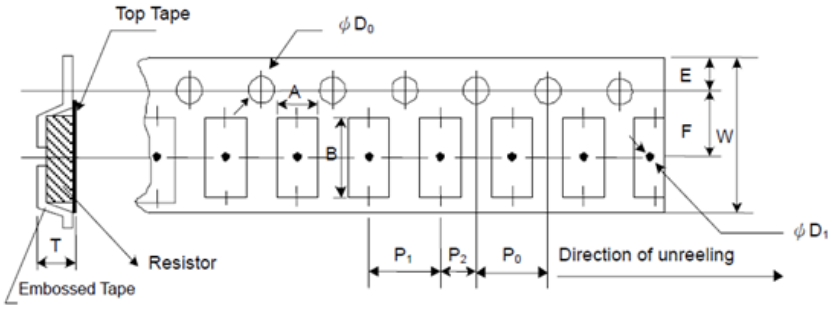
Operating Temperature Range: -55°C to +170°C

Power Derating Curve:





Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Unit
CSNL1206	0.126 ± 0.010 3.20 ± 0.25	0.063 ± 0.010 1.60 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	0.020 ± 0.010 0.51 ± 0.25	inches mm
CSNL2010 (≤3mΩ)	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	0.051 ± 0.010 1.30 ± 0.25	inches mm
CSNL2010 (≥3.1mΩ)	0.200 ± 0.010 5.08 ± 0.25	0.100 ± 0.010 2.54 ± 0.25	0.025 ± 0.010 0.65 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	0.031 ± 0.010 0.79 ± 0.25	inches mm
CSNL2512 (0.5mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.049 ± 0.008 1.25 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (0.75mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.030 ± 0.008 0.75 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (1.0mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.026 ± 0.008 0.65 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (1.5mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.018 ± 0.008 0.45 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (2.0mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.014 ± 0.008 0.35 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (2.5mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.026 ± 0.008 0.65 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (3mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.022 ± 0.008 0.55 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (4mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.018 ± 0.008 0.45 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (5mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.014 ± 0.008 0.35 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (6mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.013 ± 0.008 0.32 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (6.5mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.012 ± 0.008 0.30 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (7mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.011 ± 0.008 0.27 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm
CSNL2512 (10mΩ)	0.250 ± 0.010 6.35 ± 0.25	0.125 ± 0.010 3.18 ± 0.25	0.010 ± 0.008 0.25 ± 0.20	0.051 ± 0.015 1.30 ± 0.38	0.051 ± 0.015 1.30 ± 0.38	inches mm



Packaging Specifications

Type/Code	Ohmic Value (Ω)	Quantity	A	B	W	E	F	P0	Unit
CSNL1206	0.001 - 0.05	4,000	0.072 ± 0.004 1.83 ± 0.10	0.137 ± 0.004 3.48 ± 0.10	0.315 ± 0.006 8.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.004 3.50 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	inches mm
CSNL2010	0.0005 - 0.01	2,000	0.114 ± 0.004 2.90 ± 0.10	0.215 ± 0.004 5.45 ± 0.10	0.472 ± 0.006 12.00 ± 0.15	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	inches mm
CSNL2512	0.0005 - 0.00075	2,000	0.134 ± 0.004 3.40 ± 0.10	0.266 ± 0.004 6.75 ± 0.10	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
	0.001 - 0.01	2,000	0.134 ± 0.004 3.40 ± 0.10	0.266 ± 0.004 6.75 ± 0.10	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm

Type/Code	Ohmic Value (Ω)	Quantity	P1	P2	ØD0	ØD1	T	Unit
CSNL1206	0.001 - 0.05	4,000	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 ± 0.004 1.50 ± 0.10	-	0.043 ± 0.004 1.10 ± 0.10	inches mm
CSNL2010	0.0005 - 0.01	2,000	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.004 2.00 ± 0.10	0.059 ± 0.004 1.50 ± 0.10	-	0.052 ± 0.004 1.33 ± 0.10	inches mm
CSNL2512	0.0005 - 0.00075	2,000	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.055 min. 1.40 min.	0.057 ± 0.008 1.45 ± 0.20	inches mm
	0.001 - 0.01	2,000	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.061 ± 0.002 1.55 ± 0.05	0.055 min. 1.40 min.	0.032 ± 0.004 0.81 ± 0.10	inches mm

How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13	14
C	S	N	L	1	2	0	6	F	T	1	0	L	0

Product Series	
CSNL	Metal Foil

Size	Power
1206	1W
2010	1.5W
2512	2W

Tolerance	
Code	Tol
F	1%
J	5%

Packaging			
Code	Description	Size	Quantity
T	7" Reel - Plastic Tape	1206	4,000
		2010, 2512	2,000

Resistance Value
Four characters with the multiplier used as the decimal holder. "L" used as multiplier of 10^{-3} for any value under 0.1 ohm.
0.0005 Ohm = L500 0.001 Ohm = 1L00 0.01 Ohm = 10L0 0.1 Ohm = R100