

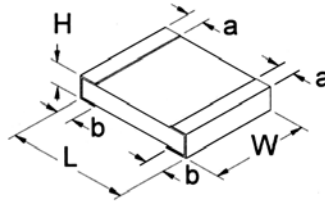
- Features:
- High power current sense resistor
 - TCR of ± 50 ppm/ $^{\circ}\text{C}$
 - Resistances down to 0.0005 (1/2 m Ω)
 - Current handling up to 63 amps
 - Non-standard resistance values available
 - RoHS compliant / lead-free



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 @ 80 $^{\circ}\text{C}$	200V	± 50 ppm/ $^{\circ}\text{C}$	0.001 - 0.05
CSNL2010	1	1.5W @ 80 $^{\circ}\text{C}$	200V	± 50 ppm/ $^{\circ}\text{C}$	0.0005 - 0.1
CSNL2512	2	2W @ 70 $^{\circ}\text{C}$	200V	± 50 ppm/ $^{\circ}\text{C}$	0.0005 - 0.01

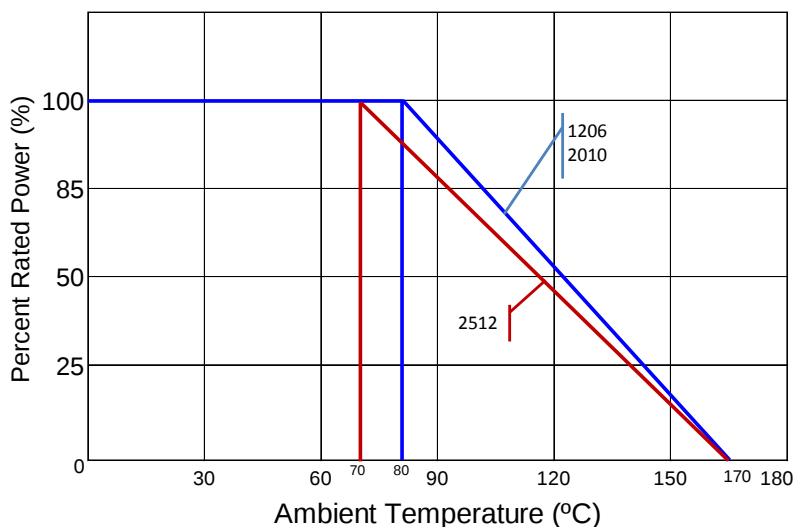
Performance Characteristics			
Test	Test Method	Test Specification	Typical
Load Life	MIL-STD-502F-Method 108A RCWV at 70 $^{\circ}\text{C}$; 1.5h ON; 0.5h OFF Total 1024 $\pm$ 24h	$\pm 0.5\%$	$\leq 1\%$
Resistance to Soldering Heat	MIL-STD-202F-Method 210E 260 $\pm$ 5 $^{\circ}\text{C}$ for 10 $\pm$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

Operating Temperature Range: -55 $^{\circ}\text{C}$ to +170 $^{\circ}\text{C}$



Mechanical Specifications						
Type / Code	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom	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

Power Derating Curve:



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		Size	Power	Tolerance		Packaging				Resistance Value			
CSNL	Metal Foil	1206	1W	Code	Tol	Code	Description	Size	Quantity	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			
		2010	1.5W	F	1%	T	7" Reel - Plastic Tape	1206	4,000				
		2512	2W	J	5%			2010, 2512	2,000				

Legacy Part Number (before January 3, 2011):

SEI Type		Code		Nominal Resistance	Tolerance	Packaging			
CSNL		1/2		0.01	1%	R			
Type	Description	Code	Wattage	Size	Tolerance	SEI Types	Pkg Qty	Description	Code
CSNL	Metal Foil	1/2	1W	1206	1%	1206	4,000	7" reel - plastic tape	R
		1	1.5W	2010	5%	2010, 2512	2,000		
		2	2W	2512					