

Current Sensing Chip Resistors

Performance Specification

Short Time Overload	1%: $\pm (1.0\% + 0.005\Omega)\text{Max}$ 5%: $\pm (2.0\% + 0.005\Omega)\text{Max}$
Terminal Bending	$\pm (1.0\% + 0.005\Omega)\text{Max}$
Solderability	Min. 95% coverage.
Temperature Cycling	$\pm (1.0\% + 0.005\Omega)\text{Max}$
Soldering Heat	$\pm (1.0\% + 0.005\Omega)\text{Max}$
Load Life in Humidity	5% : $\pm (3.0\% + 0.005\Omega)\text{Max}$ 1% : $\pm (1.0\% + 0.005\Omega)\text{Max}$
Load Life	5% : $\pm (3.0\% + 0.005\Omega)\text{Max}$ 1% : $\pm (1.0\% + 0.005\Omega)\text{Max}$
Insulation Resistance	Min. 1,000 Mega Ohm
Dielectric Withstanding Voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown.

CS07 size in 0.75W 0.1 ~ 1Ω 100PPM/°C could be provided specially (* CS07 0.75W 0.1 ~ 1Ω 100PPM/°C)

Ordering Procedure: Ex.: CS03, 1/10W, +/-5%, 22mΩ T/R-5000

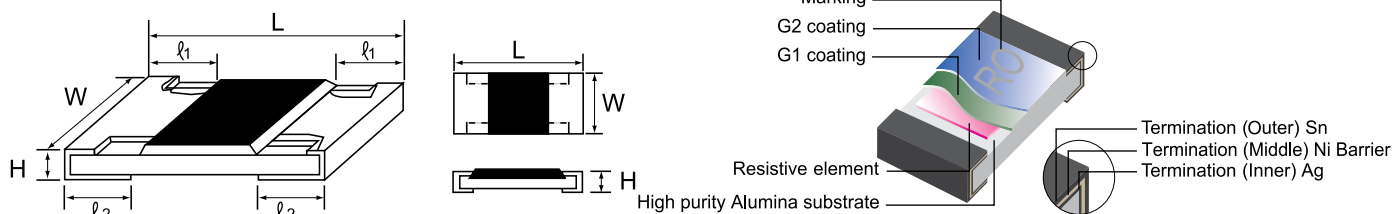
C	S	0	3	W	A	J	0	2	2	L	T	5	E
Resistor Size: CS03 = 0603, CS05 = 0805, CS06 = 1206, CS07 = 1210, CS10 = 2010, CS12 = 2512							Resistance Value: - E-24 series: 1st digit is "0" 2nd & 3rd digits are significant figures of the resistance 4th indicates the number of zeros - E-96 series: 1st to 3rd digits are significant figures of the resistance 4th digit indicates the number of zeros. "J" ~ 0.1, "K" ~ 0.01, "L" ~ 0.001, "M" ~ 0.0001 Ex. 022J ~ 22mΩ, 200M ~ 20mΩ						
Wattage: Normal size: WA=1/10W, W8=1/8W,W4=1/4W, W3=1/3W, W2=1/2W,34=3/4W, 1W=1W, WJ=1.5W Small size: S4=1/4W-S, S3=1/3W-S, 07=3/4W-S, S5=1/5W-S, S2=1/2W-S													
				Tolerance: F = ±1% J = ±5%							Packing Type: T = Tape/Reel		
											Packing Qty: 4 = 4,000 pcs. 5 = 5,000 pcs.		
											Special Feature: E = Lead (Pb) Free Plating Type/ RoHS compliant T = Special T.C.R.		

Current Sensing Chip Resistors

Features

- Ultra low Value
- Low Temperature Coefficient
- Suitable for wave and reflow soldering
- Application: Power supply
- High Power rating available upon request

Dimension



Type	Power Rating at 70°C	Dielectric Withstanding Voltage	Tolerance %	Resistance Range (mΩ)	T.C.R. (PPM/°C)	Dimension (mm)				
						L	W	H	l ₁	l ₂
CS03 (0603)	1/10W, 1/5W-S	300V	±1% ±5%	20mΩ ~ 29.9mΩ	±800	1.60±0.10	0.80 ^{+0.15} _{-0.10}	0.45±0.10	0.30±0.20	0.30±0.20
				30mΩ ~ 32.9mΩ	±600					
				33mΩ ~ 50mΩ	±400					
				50.1mΩ ~ 0.1Ω	±300					
				0.11Ω ~ 1Ω	±200					
CS05 (0805)	1/8W, 1/4W-S	500V	±1% ±5%	10mΩ ~ 15mΩ	±800	2.00±0.15	1.25 ^{+0.15} _{-0.10}	0.55±0.10	0.40±0.20	0.40±0.20
				15.1mΩ ~ 25mΩ	±600					
				25.1mΩ ~ 50mΩ	±400					
				50.1mΩ ~ 0.2Ω	±200					
				0.21Ω ~ 1Ω	±100					
CS06 (1206)	1/4W, 1/3W-S	500V	±1% ±5%	10mΩ ~ 14.9mΩ	±700	3.10±0.15	1.55 ^{+0.15} _{-0.10}	0.55±0.10	0.45±0.20	0.45±0.20
				15mΩ ~ 30mΩ	±400					
				30.1mΩ ~ 50mΩ	±300					
				50.1mΩ ~ 0.1Ω	±200					
				0.11Ω ~ 1Ω	±150					
CS07 (1210)	1/3W, 1/2W-S	500V	±1% ±5%	10mΩ ~ 14.9mΩ	±500	3.10±0.10	2.60±0.15	0.55±0.10	0.50±0.25	0.50±0.20
				15mΩ ~ 19.9mΩ	±400					
				20mΩ ~ 50mΩ	±300					
				50.1mΩ ~ 1Ω	±100					
CS10 (2010)	1/2W, 3/4W-S	500V	±1% ±5%	10mΩ ~ 14.9mΩ	±600	5.00±0.10	2.50±0.15	0.55±0.10	0.60±0.25	0.50±0.20
				15mΩ ~ 19.9mΩ	±500					
				20mΩ ~ 30mΩ	±300					
				30.1mΩ ~ 50mΩ	±200					
				50.1mΩ ~ 0.1Ω	±150					
CS12 (2512)	1W	500V	±1% ±5%	0.1Ω ~ 1Ω	±100	6.35±0.10	3.20±0.15	0.55±0.10	0.60±0.25	0.80±0.30
				10mΩ ~ 14.9mΩ	±600					
				15mΩ ~ 19.9mΩ	±400					
				20mΩ ~ 30mΩ	±300					
				30.1mΩ ~ 50mΩ	±200					

Note:

- 1.) Standard Operating Temp (°C) : -55 ~ +155
- 2.) Standard : E-96 series : 1%
E-24 series : 5%
- 3.) High power available on case to case basis.
- 4.) CS07 size in 0.75W 100mΩ ~ 1Ω 100PPM/°C could be provided specially.
- 5.) CS12 size in 1W 50.1mΩ ~ 100mΩ 100PPM/°C could be provided specially.