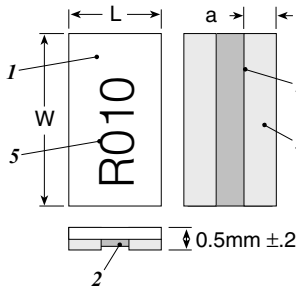


FCSL Series

Metal Foil Current Sense



1. Alumina substrate
2. Resistive element (Ni-Cu Alloy)
3. Electrode (Ni, Sn)
4. Protective coating (Epoxy resin)
5. Marking (Epoxy resin)

Series	Power Rating	Resistance Range	Tol.	TCR (ppm/°C)	Dim. (in./mm ±0.20)		
					L	W	a
FCSL64	2.0W	1mΩ ~ 2mΩ	±2%	±100	0.122/3.1	0.248/6.3	0.047/1.2
		3mΩ ~ 50mΩ	±1%	±50		0.055/1.4	
FCSL76	3.0W	1mΩ ~ 2mΩ	±2%	±100	0.15/3.8	0.3/7.6	0.053/1.35
		3mΩ ~ 50mΩ	±1%	±50		0.065/1.65	
FCSL90	4.0W	1mΩ ~ 2mΩ	±2%	±100	0.177/4.5	0.35/8.9	0.063/1.6
		3mΩ ~ 50mΩ	±1%	±50		0.079/2.0	

ORDERING INFORMATION

RoHS Compliant

F C S L 6 4 R 0 0 5 J E R

Series	Package Size	Ohms	Tolerance	Taping Code
	64=6432=2W	R005 = 0.005Ω	J = 5%	R = 1,000 pc/reel
	76=7638=3W	R050 = 0.050Ω	G = 2%	
	90=9045=4W		F = 1%	

STANDARD VALUES

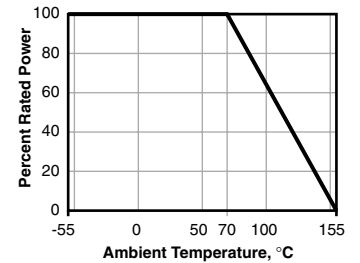
Ohms	2 Watts	3 Watts	4 Watts	Tolerance	TCR
0.0010	FCSL64R001JE	FCSL76R001JE	FCSL90R001JE	±5%	±150ppm/°C
0.0020	FCSL64R002GE	FCSL76R002GE	FCSL90R002GE	±2%	±100ppm/°C
0.0050	FCSL64R005FE	FCSL76R005FE	FCSL90R005FE	±1%	±50ppm/°C
0.0100	FCSL64R010FE	FCSL76R010FE	FCSL90R010FE	±1%	±50ppm/°C
0.0250	FCSL64R025FE	FCSL76R025FE	FCSL90R025FE	±1%	±50ppm/°C
0.0500	FCSL64R050FE	FCSL76R050FE	FCSL90R050FE	±1%	±50ppm/°C

Ohmite continues to add to its complement of Current Sense offerings with the FCS Series. FCS incorporates proven metal foil technology to produce the ultimate in a current sense resistor. FCS features the effective combination of very low and stable TCRs (Temperature Coefficient of Resistance) available in a wide selection of very low ohmic values. Power ratings up to 4 Watts makes FCS the ideal choice for your current sensing applications.

FEATURES

- Foil Construction ensures a very stable TCR (Temperature Coefficient of Resistance)
- Designed for automatic insertion
- Industry standard sizes
- High heat resistant use
- Low heat electromotive use
- Color: white (top) and green (bottom)

DERATING



PERFORMANCE CHARACTERISTICS

Test	Condition	Maximum ΔR
Max. temperature for rated power	70°C	
Operating temperature range	-55°C ~ +155°C	
Rated voltage	$\sqrt{(\text{Rated power} \times \text{Resistance value})}$ V	
Rush current*	Rated current 10 msec ON, 60 sec OFF, 10 cycles*	±(1.0% + 0.0005Ω)
Rapid change of temperature	-55°C (30min.)/+155°C (30min.), 100 cycles	±(1.0% + 0.0005Ω)
Solderability	245°C ±5°C for 3 ±0.5 sec.	Min. 90% coverage
Endurance at 70°C	70°C ±3°C, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(1.0% + 0.0005Ω)
Resistance to soldering heat	260°C ±5°C for 10 ±1 sec.	±(0.5% + 0.0005Ω)
Moisture resistance	60°C ±2°C, 90-95% RH, Rated voltage 1.5h ON, 0.5h OFF, 1000h	±(2.0% + 0.0005Ω)

*Rated current and max. current are shown at right.
Rush current = $\sqrt{(\text{Rush power} \div \text{Ohm value})}$ or max. current, whichever is smaller.

Series	Rated Wattage	Rush Power (10 msec.)	Max. Current
FCSL64	2.0W	225W	150A
FCSL76	3.0W	325W	180A
FCSL90	4.0W	440W	210A