

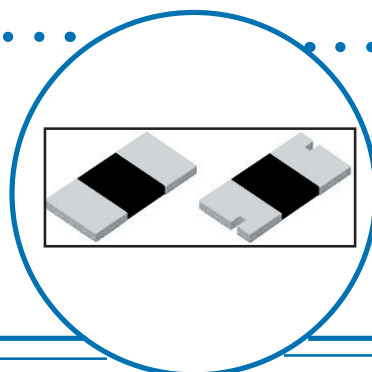
## CSS SERIES

OBSOLETE



## CURRENT SENSE SMT CHIP RESISTOR

- 1 watt in a 2512 package size (2W @ 25°C)
- Available in 2 & 4 terminal (Kelvin) designs
- Very low resistance range ( $.0005\Omega$  to  $.003\Omega$ )
- High current handling capacity (45 amps continuous max)
- Low TCR (20 ppm/°C) resistor alloy
- $\pm 5\%$  & 1% Standard Tolerance (see note on 1% tolerance)



## FEATURES:

- Low Inductance
- Rugged Construction
- Surface Mount

## APPLICATIONS:

- Current Sensing
- Feed Back
- High Frequency

## OPERATING CHARACTERISTICS:

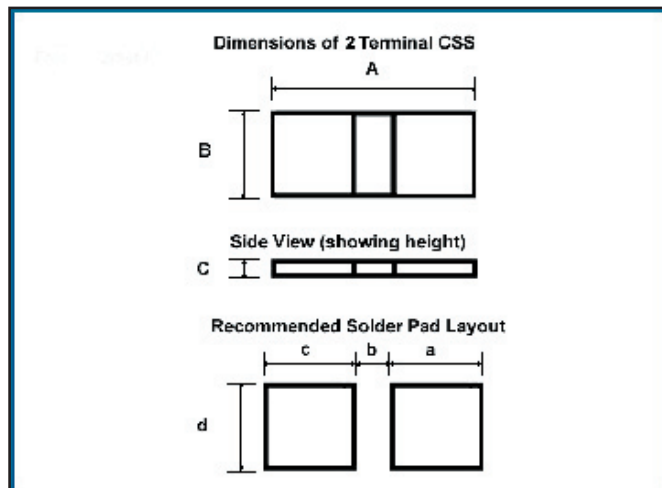
- Load Life @ 70°C: 1%  $\Delta$  Max
- Moisture No Load: 1%  $\Delta$  Max
- Temp Cycle @ -40°C & +125°C: 1%  $\Delta$  Max

## SPECIFICATIONS:

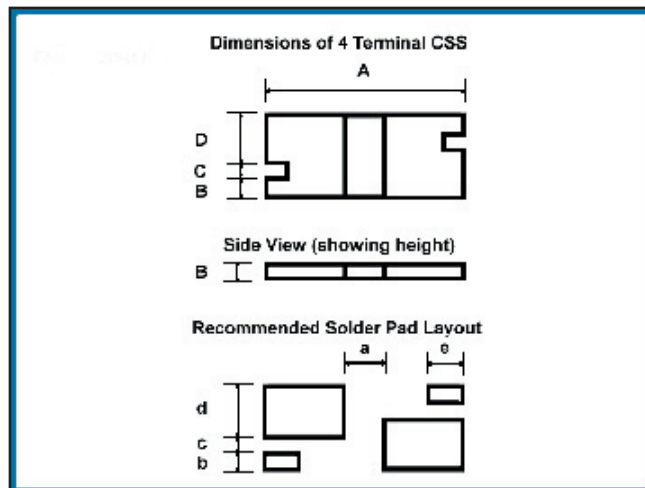
| Power (watts) | Current Rating (amps)          | Standard Resistance Values ( $\Omega$ )                                                                                   | Tolerance ( $\pm\%$ ) |
|---------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1@70° C       | Range Dependant (45 cont. max) | 0.0005 $\Omega$ , 0.001 $\Omega$ , 0.0015 $\Omega$ & 0.002 $\Omega$ , 0.003 $\Omega$<br>*contact factory for other values | 5%, 1%*               |

\*Product performance within 1% distribution centered on nominal. Test nominal set by a Tegram 1750 at 25°C as calibrated to the test system's capability.

## DIMENSIONS:



|             | A     | B     | C     | a     | b     | c     | d     |
|-------------|-------|-------|-------|-------|-------|-------|-------|
| Inches      | 0.250 | 0.125 | 0.030 | 0.120 | 0.050 | 0.120 | 0.145 |
| Millimeters | 6.35  | 3.18  | 0.76  | 3.05  | 1.27  | 3.05  | 3.68  |



|             | A     | B     | C     | D     | a     | b     | c     | d     | e     |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inches      | 0.250 | 0.030 | 0.020 | 0.075 | 0.065 | 0.020 | 0.030 | 0.080 | 0.055 |
| Millimeters | 6.35  | 0.76  | 0.51  | 1.91  | 1.65  | 0.51  | 0.76  | 2.032 | 1.397 |

## General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

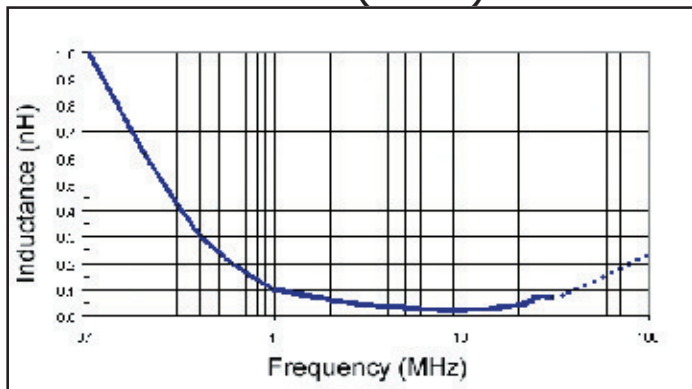
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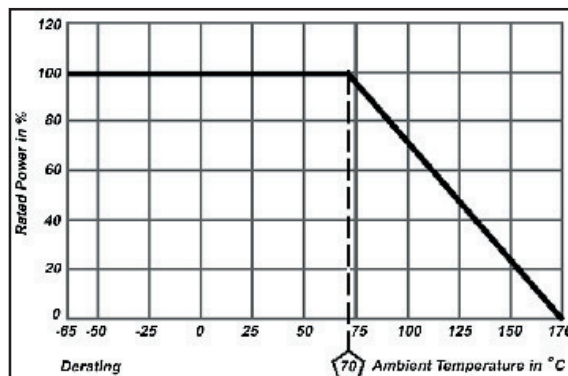


# OBSOLETE

## Inductance Data (R001)



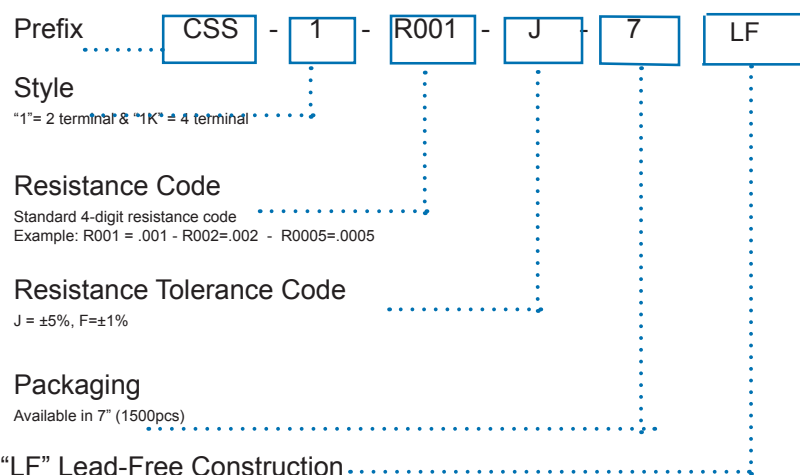
## Temperature Derating



## TEST PERFORMANCE

| Test                      | Conditions of Test                                                 | Test Limits |
|---------------------------|--------------------------------------------------------------------|-------------|
| Load Life                 | 1000 hours @ rated power, +70°C, 1.5 hours "on", 0.5 hours "off"   | ±(2%) Δ     |
| Moisture Resistance       | MIL-STD-202 Method 106, 0% power, 7a and 7b not required           | ±(2%) Δ     |
| Vibration                 | Frequency varied 10 to 2000 Hz in 1 minute, 3 directions, 12 hours | ±(2%) Δ     |
| Thermal Shock             | -55°C to +150°C, 1000 cycles, 15 minutes at each extreme           | ±(2%) Δ     |
| Short Time Overload       | 5x power for 5 seconds                                             | ±(2%) Δ     |
| Low Temperature Storage   | -55°C for 24 hours                                                 | ±(2%) Δ     |
| High Temperature Exposure | 1000 hours @ 170°C                                                 | ±(2%) Δ     |
| Bias Humidity             | +85°C, 85% RH, 10% Bias, 1000 hours                                | ±(2%) Δ     |
| Mechanical Shock          | 100gs for 6 milliseconds, 5 pulses                                 | ±(2%) Δ     |
| Resistance to Solder Heat | +260°C Solder, 10-12 second dwell, 25mm/second emergence           | ±(2%) Δ     |

## ORDERING PROCEDURE



\*For packaging information, see Appendix

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