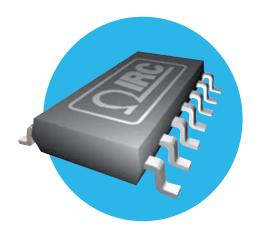
### Resistors

# **Surface Mount SOIC Resistor Networks**

#### **SOIC Series**

- Tested for COTS applications
- Both narrow and wide body versions available
- Standard JEDEC 8, 14, 16, and 20 pin packages
- Ultra-stable TaNSil® resistors on silicon substrates
- Standard Sn/Pb and Pb-free terminations available







All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

IRC's TaNSil® SOIC resistor networks are the perfect solution for high volume applications that demand a small wiring board footprint. The .050" lead spacing provides higher lead density, increased component count, lower resistor cost, and high reliability.

The tantalum nitride film system on silicon provides precision tolerance, exceptional TCR tracking, low cost and miniature package. Excellent performance in harsh, humid environments is a trademark of IRC's self-passivating TaNSil® resistor film.

The SOIC series is ideally suited for the latest surface mount assembly techniques and each lead can be 100% visually inspected. The compliant gull wing leads relieve thermal expansion and contraction stresses created by soldering and temperature excursions.

For applications requiring high performance resistor networks in a low cost, surface mount package, specify IRC SOIC resistor networks.

#### **Electrical Data**

Resistance Range	10R to 250K		
Absolute Tolerance	To ±0.1%		
Ratio Tolerance to R1	To ±0.05%		
Absolute TCR	To ±25ppm/°C		
Tracking TCR	To ±5ppm/°C		
Element Power Rating @ 70°C Isolated Schematic Bussed Schematic	100mW 50mW		
Power Rating @ 70°C SOIC-N Package	8-Pin 14-Pin 16-Pin		
Power Rating @ 70°C SOIC-W Package	16-Pin 20-Pin	1.2W 1.5W	
Rated Operating Voltage (not to exceed √Power X Resistance)	100 Volts		
Operating Temperature	-55°C to +125°C		
Noise	<-30dB		

#### **Environmental Data**

Test Per MIL-PRF-83401	Typical Delta R	Max Delta R
Thermal Shock	±0.02%	±0.1%
Power Conditioning	±0.03%	±0.1%
High Temperature Exposure	±0.03%	±0.05%
Short-time Overload	±0.02%	±0.05%
Low Temperature Storage	±0.03%	±0.05%
Life	±0.05%	±0.1%

#### **Surface Mount SOIC Resistor Networks**





# Manufacturing Capability Data

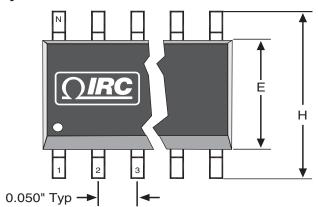
	ISOLATED SCHEMATIC A			BUSSED SCHEMATIC B				
Absolute TCR (ppm/°C)	Ohmic Range (Ω)	Available Tolerances	Available Ratio Tolerances	Best Tracking (±ppm/°C)	Ohmic Range (Ω)	Available Tolerances	Available Ratio Tolerances	Best Tracking (±ppm/°C)
	10-25	FGJ	FG	50	10-25	FGJ	FG	200
	26-50	DFGJ	CDFG	10	26-50	FGJ	DFG	100
	51-200	CDFGJ	CDFG	5	51-100	DFGJ	CDFG	50
250	201-250K	BCDFGJ	ABCDFG	5	101-200	DFGJ	BCDFG	25
				201-500	BCDFGJ	BCDFG	20	
					501-100K	BCDFGJ	ABCDFG	5
	26-50	DFGJ	CDFG	10	26-50	FGJ	DFG	100
	51-200	CDFGJ	CDFG	5	51-100	DFGJ	CDFG	50
100	201-250K	BCDFGJ	ABFG	5	101-200	DFGJ	BCDFG	25
				201-500	BCDFGJ	BCDFG	20	
					501-100K	BCDFGJ	ABCDFG	5
	26-50	DFGJ	CDFG	10	51-100	DFGJ	CDFG	50
50	51-200	CDFGJ	CDFG	5	101-200	DFGJ	BCDFG	25
	201-250K	BCDFGJ	ABFG	5	201-500	BCDFGJ	BCDFG	20
				501-100K	BCDFGJ	ABCDFG	5	
0-	51-200	CDFGJ	CDFG	5	201-500	BCDFGJ	BCDFG	20
25	201-250K	BCDFGJ	ABFG	5	501-100K	BCDFGJ	ABCDFG	5

### **Surface Mount SOIC Resistor Networks**

**SOIC Series** 

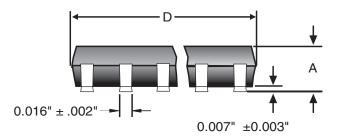


## Physical and Schematic Data

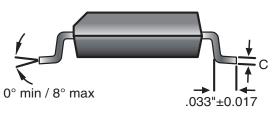


	SOIC-N			SOIC-W		
	8-Pin	14-Pin	16-Pin	16-Pin	20-Pin	
D	0.193"±0.004 (4.902 ± 0.102)	0.341"±0.004 (8.661 ± 0.102)	0.390"±0.004 (9.906 ± 0.102)	0.402"±0.004 (10.211 ± 0.102)	0.502"±0.004 (12.751 ± 0.102)	
Н	0.236"±0.008 (5.994 ± 0.203)			0.406"±0.008 (10.312 ± 0.203)		
Е	0.153"±.004 (3.886 ± 0.102)			0.295"±0.004 (7.493 ± 0.102)		
Α	0.064"±0.004 (1.626 ± 0.102)			0.100"±0.004 (2.540 ± 0.102)		
С	0.0075" - 0.010" (0.191 ± 0.254)			0.011"±0.002 (0.279 ± 0.051)		

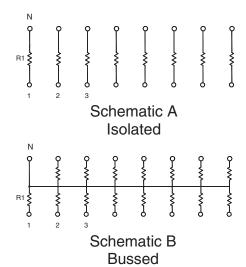
Note: N = number of pins (8, 14, 16)



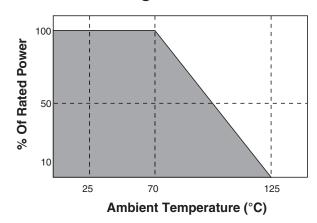
Note: All dimesions exclude mold flash and end flash which shall not exceed 0.006" per side.



Note: Lead Coplanarity 0.004" Max.



# **Power Derating Curve**



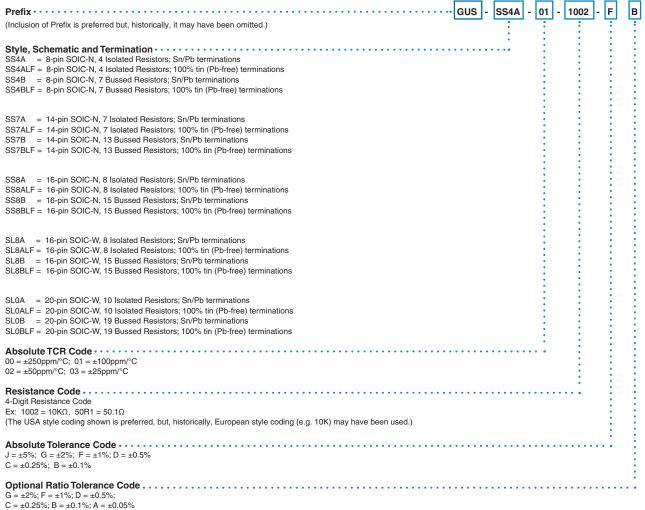
For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.

#### **Surface Mount SOIC Resistor Networks**





## **Ordering Data**



#### Packaging

Specify tubes or tape & reel.

Tape and reel packaging is compliant with EIA-481-D: 8 mm through 200 mm Embossed Carrier Taping and 8 mm and 12 mm Punched Carrier Taping of Surface Mount Components

Tube packaging drawing detail available upon request.