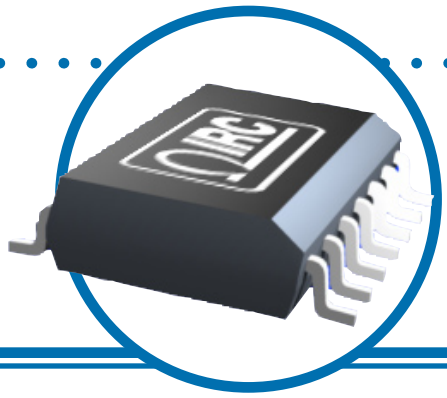
Surface Mount SOIC Resistor Networks

TT electronics

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
- RoHS compliant and Sn/Pb terminations available



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	10 – 250KΩ
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 400mW 14-Pin 700mW 16-Pin 800mW
Power Rating @ 70°C SOIC-W Package	16-Pin 1.2W 20-Pin 1.5W
Rated Operating Voltage (not to exceed $\sqrt{\text{Power X Resistance}}$)	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%	±2.0%

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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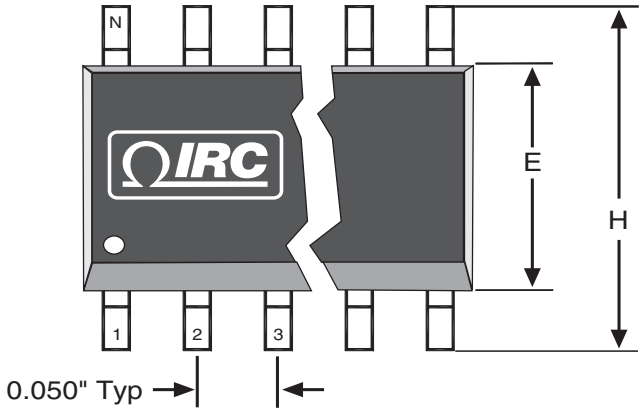
Manufacturing Capability Data

Absolute TCR (ppm/°C)	ISOLATED SCHEMATIC A				BUSSED SCHEMATIC B			
	Ohmic Range (Ω)	Available Tolerances	Available Ratio Tolerances	Best Tracking (±ppm/°C)	Ohmic Range (Ω)	Available Tolerances	Available Ratio Tolerances	Best Tracking (±ppm/°C)
250	10-25	F G J	F G	50	10-25	F G J	F G	200
	26-50	D F G J	C D F G	10	26-50	F G J	D F G	100
	51-200	C D F G J	C D F G	5	51-100	D F G J	C D F G	50
	201-250K	B C D F G J	A B C D F G	5	101-200	D F G J	B C D F G	25
					201-500	B C D F G J	B C D F G	20
					501-100K	B C D F G J	A B C D F G	5
100	26-50	D F G J	C D F G	10	26-50	F G J	D F G	100
	51-200	C D F G J	C D F G	5	51-100	D F G J	C D F G	50
	201-250K	B C D F G J	A B F G	5	101-200	D F G J	B C D F G	25
					201-500	B C D F G J	B C D F G	20
					501-100K	B C D F G J	A B C D F G	5
50	26-50	D F G J	C D F G	10	51-100	D F G J	C D F G	50
	51-200	C D F G J	C D F G	5	101-200	D F G J	B C D F G	25
	201-250K	B C D F G J	A B F G	5	201-500	B C D F G J	B C D F G	20
					501-100K	B C D F G J	A B C D F G	5
25	51-200	C D F G J	C D F G	5	201-500	B C D F G J	B C D F G	20
	201-250K	B C D F G J	A B F G	5	501-100K	B C D F G J	A B C D F G	5

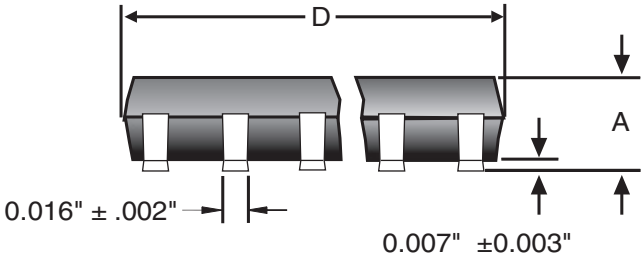
Surface Mount SOIC Resistor Networks

Physical and Schematic Data



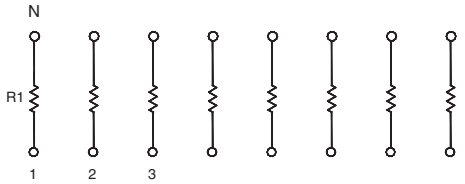
	SOIC-N			SOIC-W	
	8-Pin	14-Pin	16-Pin	16-Pin	20-Pin
D	0.193"±0.004	0.341"±0.004	0.390"±0.004	0.402"±0.004	0.502"±0.004
H	0.236"±0.008			0.406"±0.008	
E	0.153"±.004			0.295"±0.004	
A	0.064"±0.004			0.100"±0.004	
C	0.0075" - 0.010"			0.011"±0.002	

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

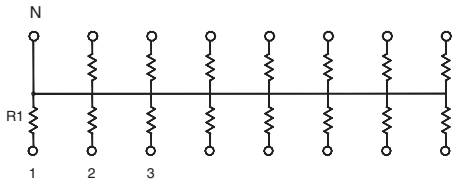


Note: All dimesions exclude mold flash and end flash which shall not exceed 0.006" per side.

Note: Lead Coplanarity 0.004" Max.

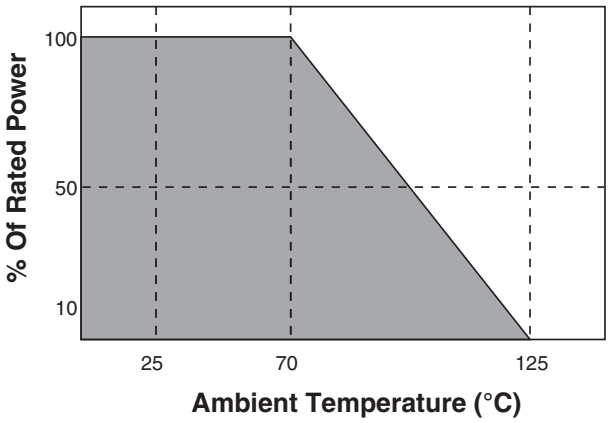


Schematic A
Isolated



Schematic B
Bussed

Power Derating Curve



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

Ordering Data

Prefix GUS - SS4A - 01 - 1002 - F B

Style, Schematic and Termination

SS4A = 8-pin SOIC-N, 4 Isolated Resistors; Sn/Pb terminations
SS4ALF = 8-pin SOIC-N, 4 Isolated Resistors; 100% tin (Pb-free) terminations
SS4B = 8-pin SOIC-N, 7 Bussed Resistors; Sn/Pb terminations
SS4BLF = 8-pin SOIC-N, 7 Bussed Resistors; 100% tin (Pb-free) terminations

SS7A = 14-pin SOIC-N, 7 Isolated Resistors; Sn/Pb terminations
SS7ALF = 14-pin SOIC-N, 7 Isolated Resistors; 100% tin (Pb-free) terminations
SS7B = 14-pin SOIC-N, 13 Bussed Resistors; Sn/Pb terminations
SS7BLF = 14-pin SOIC-N, 13 Bussed Resistors; 100% tin (Pb-free) terminations

SS8A = 16-pin SOIC-N, 8 Isolated Resistors; Sn/Pb terminations
SS8ALF = 16-pin SOIC-N, 8 Isolated Resistors; 100% tin (Pb-free) terminations
SS8B = 16-pin SOIC-N, 15 Bussed Resistors; Sn/Pb terminations
SS8BLF = 16-pin SOIC-N, 15 Bussed Resistors; 100% tin (Pb-free) terminations

SL8A = 16-pin SOIC-W, 8 Isolated Resistors; Sn/Pb terminations
SL8ALF = 16-pin SOIC-W, 8 Isolated Resistors; 100% tin (Pb-free) terminations
SL8B = 16-pin SOIC-W, 15 Bussed Resistors; Sn/Pb terminations
SL8BLF = 16-pin SOIC-W, 15 Bussed Resistors; 100% tin (Pb-free) terminations

SL0A = 20-pin SOIC-W, 10 Isolated Resistors; Sn/Pb terminations
SL0ALF = 20-pin SOIC-W, 10 Isolated Resistors; 100% tin (Pb-free) terminations
SL0B = 20-pin SOIC-W, 19 Bussed Resistors; Sn/Pb terminations
SL0BLF = 20-pin SOIC-W, 19 Bussed Resistors; 100% tin (Pb-free) terminations

Absolute TCR Code
00 = ±250ppm/°C; 01 = ±100ppm/°C
02 = ±50ppm/°C; 03 = ±25ppm/°C

Resistance Code
4-Digit Resistance Code
Ex: 1002 = 10KΩ, 50R1 = 50.1Ω

Absolute Tolerance Code
J = ±5%; G = ±2%; F = ±1%; D = ±0.5%
C = ±0.25%; B = ±0.1%

Optional Ratio Tolerance Code
G = ±2%; F = ±1%; D = ±0.5%;
C = ±0.25%; B = ±0.1%; A = ±0.05%

Packaging
Specify tubes or tape & reel.