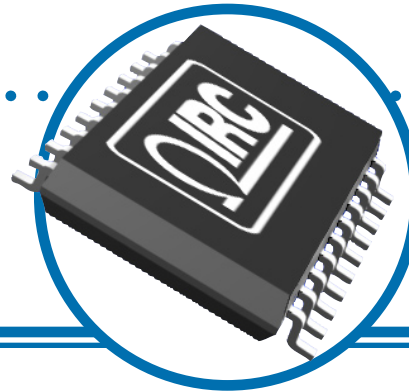


# Surface Mount TSSOP Resistor Networks



## TSSOP Series

- Absolute tolerances to  $\pm 0.1\%$
- Tight TC Tracking to  $\pm 5\text{ppm}/^\circ\text{C}$
- Ratio match tolerances to  $\pm 0.05\%$
- Ultra-stable tantalum nitride resistors
- Standard Sn/Pb and Pb-free terminations available

IRC's TaNSil® TSSOP resistor networks are ideally suited for high volume applications that demand a small, low-profile footprint. The small wire-bondable chip package provides higher component density, 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.

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

## Electrical Data

<b>Resistance Range</b>	10 $\Omega$ to 250K $\Omega$
<b>Absolute Tolerance</b>	To $\pm 0.1\%$
<b>Ratio Tolerance to R1</b>	To $\pm 0.05\%$
<b>Absolute TCR</b>	To $\pm 25\text{ppm}/^\circ\text{C}$
<b>Tracking TCR</b>	To $\pm 5\text{ppm}/^\circ\text{C}$
<b>Element Power Rating @ 70°C</b>	
<b>Isolated Schematic</b>	100mW
<b>Bussed Schematic</b>	50mW
<b>Package Power Rating @ 70°C</b>	16-Pin 800mW 20-Pin 1.0W 24-Pin 1.0W
<b>Rated Operating Voltage</b> (not to exceed $\sqrt{P \times R}$ )	100 Volts
<b>Operating Temperature</b>	-55°C to +125°C
<b>Noise</b>	<-30dB

## Environmental Data

<b>Test Per MIL-PRF-83401</b>	<b>Typical Delta R</b>	<b>Max Delta R</b>
<b>Thermal Shock</b>	$\pm 0.02\%$	$\pm 0.1\%$
<b>Power Conditioning</b>	$\pm 0.03\%$	$\pm 0.1\%$
<b>High Temperature Exposure</b>	$\pm 0.03\%$	$\pm 0.5\%$
<b>Short-time Overload</b>	$\pm 0.02\%$	$\pm 0.5\%$
<b>Low Temperature Storage</b>	$\pm 0.03\%$	$\pm 0.5\%$
<b>Life</b>	$\pm 0.05\%$	$\pm 0.1\%$

### 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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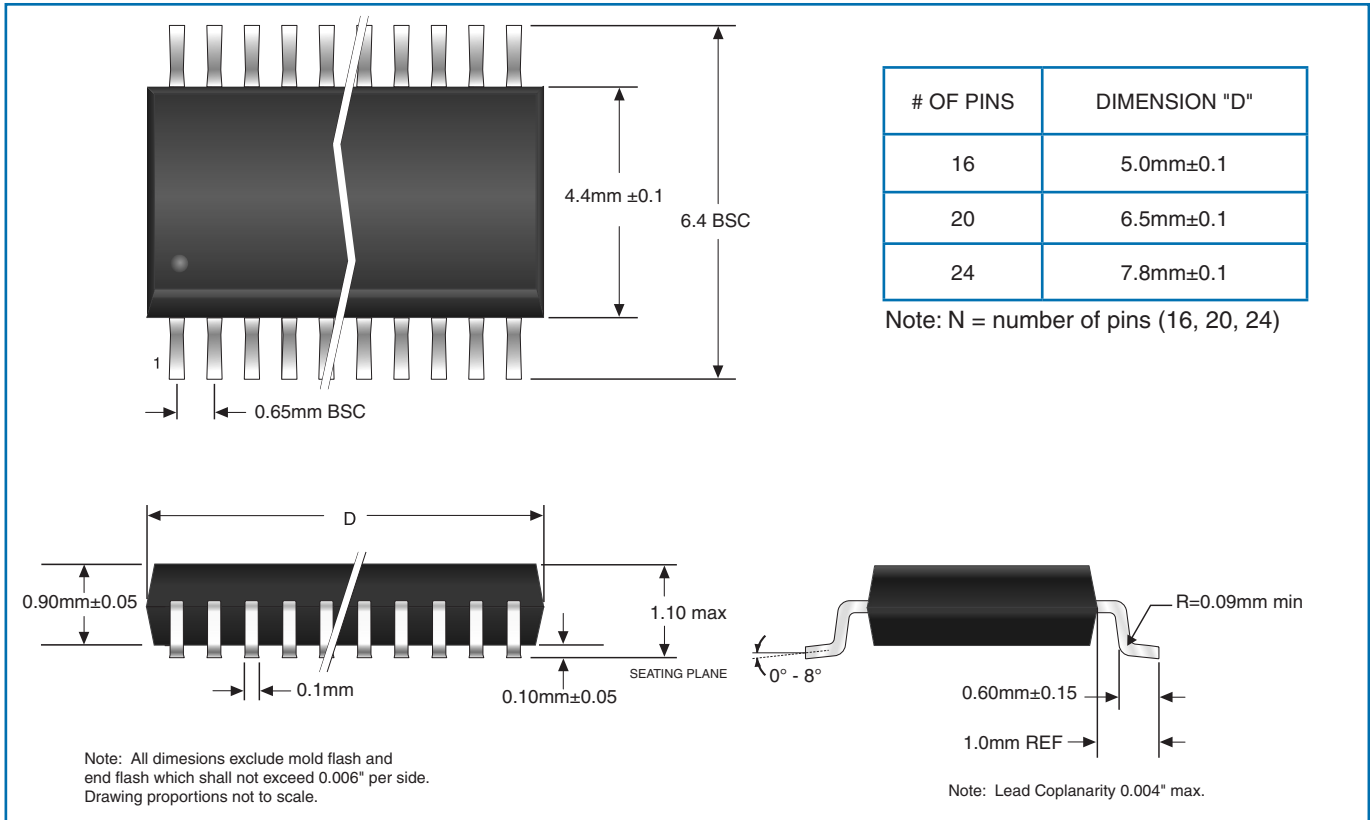


## Manufacturing Capabilities

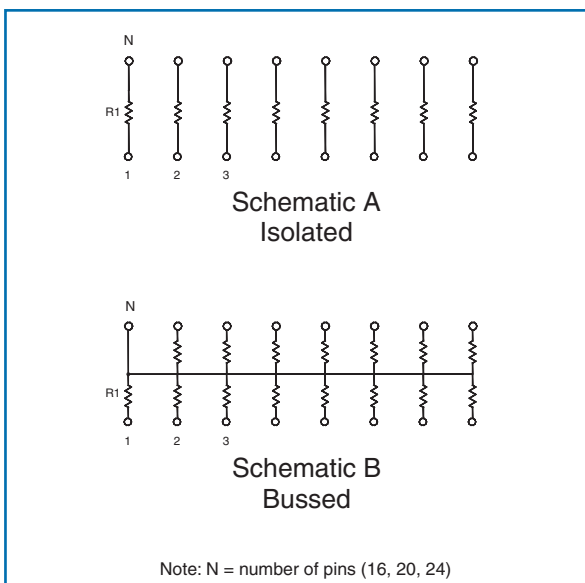
Absolute TCR ( $\pm$ ppm/ $^{\circ}$ C)	ISOLATED SCHEMATIC A				BUSSED SCHEMATIC B			
	Ohmic Range ( $\Omega$ )	Available Tolerances	Available Ratio Tolerances	Best Tracking ( $\pm$ ppm/ $^{\circ}$ C)	Ohmic Range (W)	Available Tolerances	Available Ratio Tolerances	Best Tracking ( $\pm$ ppm/ $^{\circ}$ C)
250	10 - 25	FGJ	FG	100	10 - 25	FGJ	FG	200
	26 - 50	DFGJ	CDFG	50	26 - 50	FGJ	DFG	100
	51 - 200	CDFGJ	CDFG	10	51 - 100	DFGJ	CDFG	50
	201 - 250K	BCDFGJ	ABCDG	5	101 - 200	DFGJ	BCDFG	25
					201 - 500	BCDFGJ	BCDFG	20
					501 - 100K	BCDFGJ	ABCDG	5
100	26 - 50	DFGJ	CDFG	50	26 - 50	FGJ	DFG	100
	51 - 200	CDFGJ	CDFG	10	51 - 100	DFGJ	CDFG	50
	201 - 250K	BCDFGJ	ABFG	5	101 - 200	DFGJ	BCDFG	25
					201 - 500	BCDFGJ	BCDFG	20
					501 - 100K	BCDFGJ	ABCDG	5
50	26 - 50	DFGJ	CDFG	50	51 - 100	DFGJ	CDFG	50
	51 - 200	CDFGJ	CDFG	10	101 - 200	DFGJ	BCDFG	25
	201 - 250K	BCDFGJ	ABFG	5	201 - 500	BCDFGJ	BCDFG	20
					501 - 100K	BCDFGJ	ABCDG	5
25	51 - 200	CDFGJ	CDFG	10	201 - 500	BCDFGJ	BCDFG	20
	201 - 250K	BCDFGJ	ABFG	5	501 - 100K	BCDFGJ	ABCDG	5

# Surface Mount TSSOP Resistor Networks

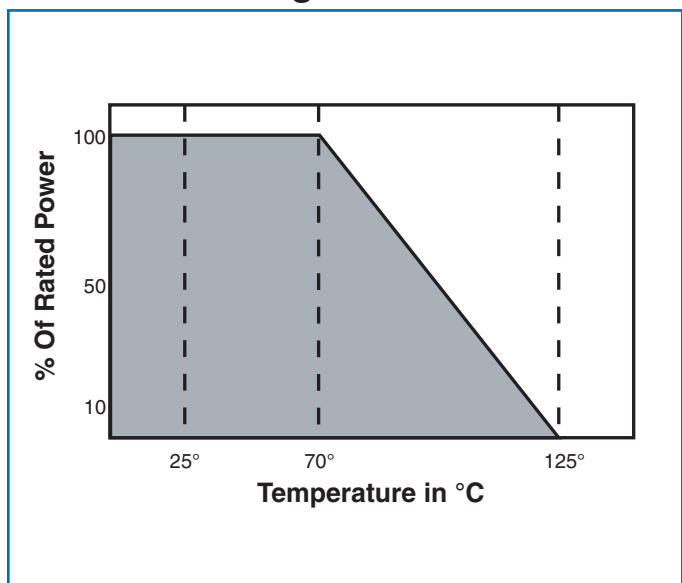
## Physical Data



## Schematic Data



## Power Derating Curve



# Surface Mount TSSOP Resistor Networks



## Ordering Data

Prefix ..... GUS - TS8A - 01 - 1002 - F B

### Style, Schematic and Termination

TS8A = 16-pin, 8 Isolated Resistors with standard Sn/Pb terminations  
TS8ALF = 16-pin, 8 Isolated Resistors with 100% matte tin, Pb-free terminations  
TS8B = 16-pin, 15 Bussed Resistors with standard Sn/Pb terminations  
TS8BLF = 16-pin, 15 Bussed Resistors with 100% matte tin, Pb-free terminations

TS0A = 20-pin, 10 Isolated Resistors with standard Sn/Pb terminations  
TS0ALF = 20-pin, 10 Isolated Resistors with 100% matte tin, Pb-free terminations  
TS0B = 20-pin, 19 Bussed Resistors with standard Sn/Pb terminations  
TS0BLF = 20-pin, 19 Bussed Resistors with 100% matte tin, Pb-free terminations

TSCA = 24-pin, 12 Isolated Resistors with standard Sn/Pb terminations  
TSCALF = 24-pin, 12 Isolated Resistors with 100% matte tin, Pb-free terminations  
TSCB = 24-pin, 23 Bussed Resistors with standard Sn/Pb terminations  
TSCBLF = 24-pin, 23 Bussed Resistors with 100% matte tin, Pb-free terminations

### Absolute TCR Code

00 =  $\pm 250$  ppm/ $^{\circ}$ C; 01 =  $\pm 100$  ppm/ $^{\circ}$ C; 02 =  $\pm 50$  ppm/ $^{\circ}$ C; 03 =  $\pm 25$  ppm/ $^{\circ}$ C

### Resistance Code

4-Digit Resistance Code  
Ex: 1002 = 10K $\Omega$ , 50R1 = 50.1 $\Omega$

### Absolute Tolerance Code

J =  $\pm 5\%$ ; G =  $\pm 2\%$ ; F =  $\pm 1\%$ ; D =  $\pm 0.5\%$ ; C =  $\pm 0.25\%$ ; B =  $\pm 0.1\%$

### Ratio Tolerance Code (optional)

G =  $\pm 2\%$ ; F =  $\pm 1\%$ ; D =  $\pm 0.5\%$ ; C =  $\pm 0.25\%$ ; B =  $\pm 0.1\%$ ; A =  $\pm 0.05\%$

### Packaging

Specify tubes or tape & reel.

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