

SOT23 Surface Mount Voltage Divider

SOT23 Series

- Extremely small footprint
- Precision ratio tolerances to $\pm 0.05\%$
- Superior alternative to matched sets
- Ultra-stable TaNSil[®] resistors on silicon substrate
- Standard Sn/Pb and Pb-free terminations available



Electrical Data

| Characteristic | Each Resistor | Total Resistance |
|--|---|------------------|
| Resistance Range | 10 - 200K Ω | 400K Ω |
| Absolute Tolerance | To $\pm 0.1\%$ | |
| Ratio Tolerance | To $\pm 0.05\%$ | |
| Absolute TCR | To $\pm 25\text{ppm}/^\circ\text{C}$ | |
| Tracking TCR | To $\pm 2\text{ppm}/^\circ\text{C}$ | |
| Element Power Rating | 125mW @ 70 $^\circ\text{C}$ | |
| Package Power Rating | 250mW @ 70 $^\circ\text{C}$ | |
| Rated Operating Voltage (not to exceed $\sqrt{\text{Power} \times \text{Resistance}}$) | 100 Volts | |
| Operating Temperature | -55 $^\circ\text{C}$ to $\pm 125^\circ\text{C}$ | |
| Noise | <-30dB | |
| Substrate Material | Silicon | |

Environmental Data

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

Manufacturing Capability

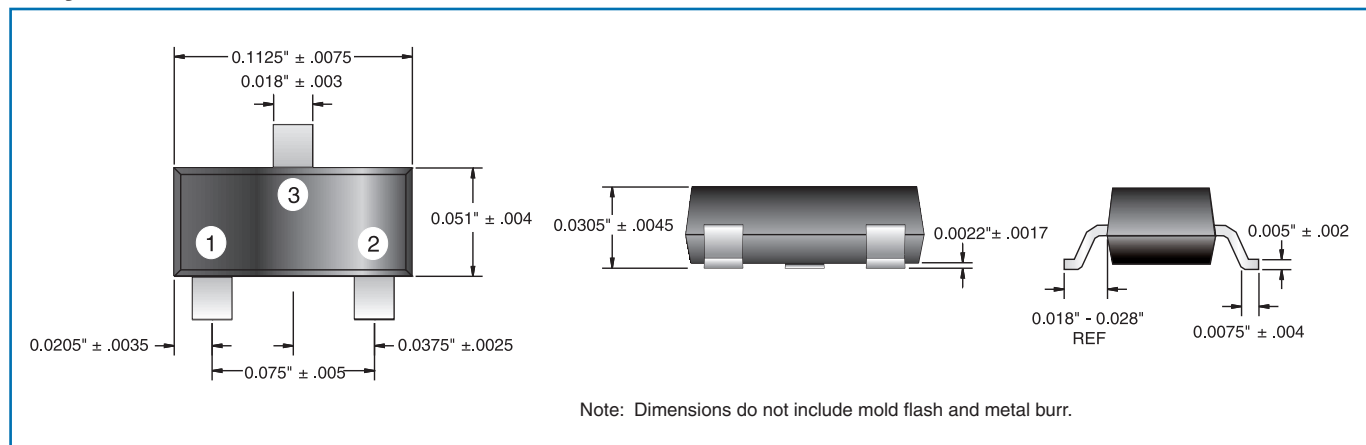
| Individual Resistance | Available Absolute Tolerances | Available Ratio Tolerances | Best Absolute TCR | Tracking TCR |
|-------------------------------|-------------------------------|----------------------------|------------------------------------|-----------------------------------|
| 10 Ω - 25 Ω | F G J K | D F G | $\pm 100\text{ppm}/^\circ\text{C}$ | $\pm 25\text{ppm}/^\circ\text{C}$ |
| 25.1 Ω - 50 Ω | D F G J K | C D F G | $\pm 50\text{ppm}/^\circ\text{C}$ | $\pm 10\text{ppm}/^\circ\text{C}$ |
| 51 Ω - 500 Ω | C D F G J K | B C D F G | $\pm 25\text{ppm}/^\circ\text{C}$ | $\pm 2\text{ppm}/^\circ\text{C}$ |
| 501 Ω - 100K Ω | B C D F G J K | A B C D F G | $\pm 25\text{ppm}/^\circ\text{C}$ | $\pm 2\text{ppm}/^\circ\text{C}$ |
| 101K Ω - 200K Ω | B C D F G J K | B C D F G | $\pm 25\text{ppm}/^\circ\text{C}$ | $\pm 2\text{ppm}/^\circ\text{C}$ |

General Note

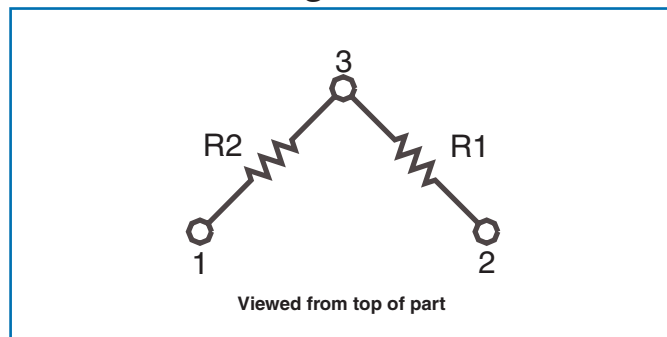
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Physical Data



Schematic Diagram



Ordering Procedure

Prefix **SOT** - **SOT23** - **01** - **1002** - **1002** - **F** **B**

Style

SOT23 = Divider network with standard Sn/Pb termination
SOT23LF = Divider network with Pb-free termination

Absolute TCR Code

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

R1 Resistance Code

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

R2 Resistance Code

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

Absolute Tolerance Code

K = ±10%; J = ±5%; G = ±2%; F = ±1%;
D = ±0.5%; C = ±0.25%; B = ±0.1%

Ratio Tolerance Code

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

Packaging

Standard packaging is tape & reel

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

Power Derating Data

