

SOT23 Surface Mount Voltage Divider

New DIV23 Series

- Replaces IRC SOT23 Series for new designs
- Precision ratio tolerances to $\pm 0.05\%$
- Superior alternative to matched sets
- Ultra-stable TaNSiL[®] resistors on silicon substrate
- RoHS Compliant and Sn/Pb terminations available



Electrical Data

Element Resistance Range	10 to 200K Ω
Total Resistance Range	20 to 400K Ω
Absolute Tolerance	To $\pm 0.1\%$
Ratio Tolerance to R1	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 @ 70°C	125mW
Package Power Rating @ 70°C	250mW
Rated Operating Voltage (not to exceed $\sqrt{P \times R}$)	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	$\pm 0.02\%$	$\pm 0.1\%$
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	$\pm 0.05\%$	$\pm 2.0\%$

Manufacturing Capability

Element 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

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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Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.ircrtt.com

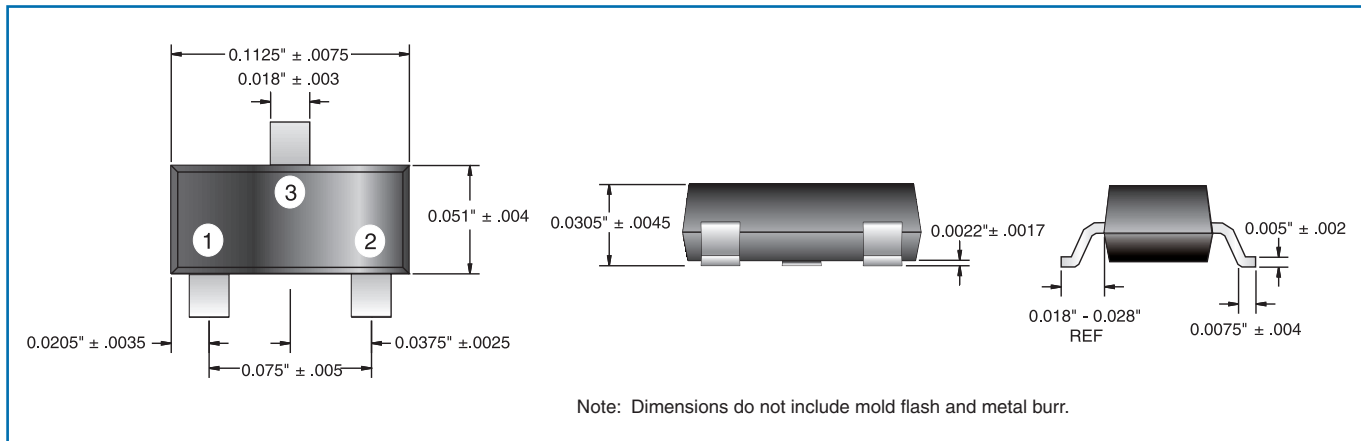


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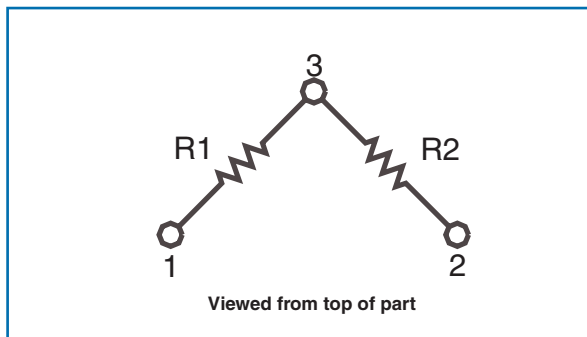
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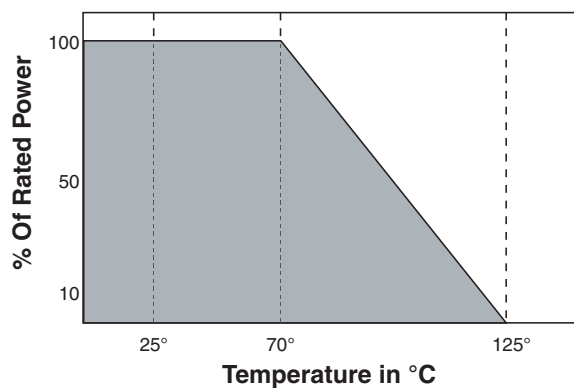
Physical Data



Schematic Data



Power Derating Data



Ordering Procedure

Prefix **SOT** - **DIV23LF** - **01** - **1002** - **1002** - **F** **B**

Style
 DIV23 = Divider network with standard Sn/Pb termination
 DIV23LF = Divider network with Pb-free termination

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

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

R2 Resistance Code
 4-Digit Resistance Code
 Ex: 1002 = 10K Ω ; 50R1 = 50.1 Ω

Absolute Tolerance Code
 K = $\pm 10\%$; J = $\pm 5\%$; G = $\pm 2\%$; F = $\pm 1\%$;
 D = $\pm 0.5\%$; C = $\pm 0.25\%$; B = $\pm 0.1\%$

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

Packaging
 Standard packaging is tape & reel.

SOT23 Series Legacy Design Note
 The SOT-DIV23 place R1 between pins 1 and 3 and R2 between pins 2 and 3.
 The SOT-SOT23 place R1 between pins 2 and 3 and R2 between pins 1 and 3.

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