

SOT23 Surface Mount Voltage Divider

DIV23 Series

- Replaces legacy 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



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

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	$\pm 0.05\%$	$\pm 0.1\%$

Manufacturing Capability

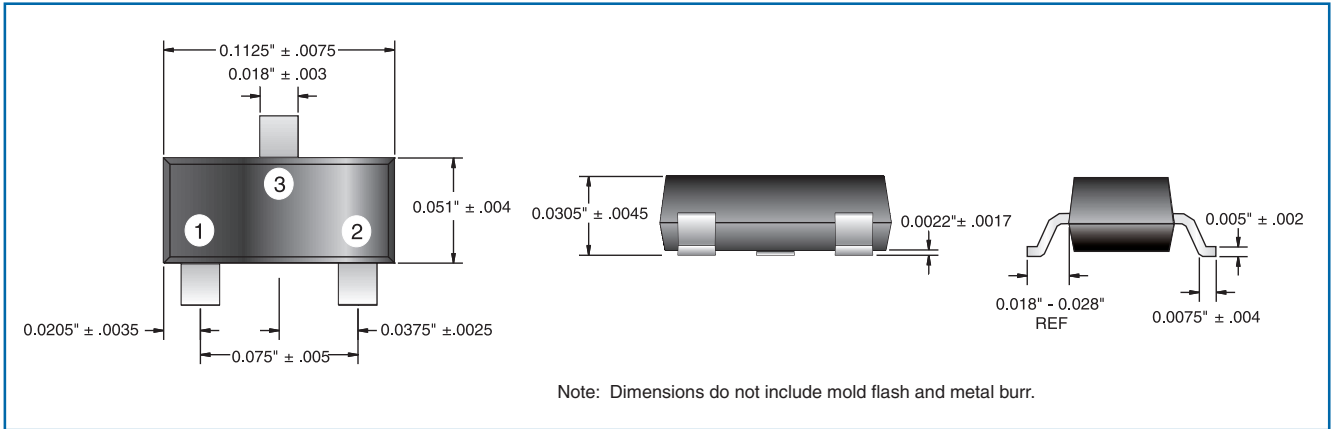
Element Resistance	Available Absolute Tolerances	Available Ratio Tolerances	Best Absolute TCR	Tracking TCR
10 Ω - 25 Ω	F G J K	D F G	$\pm 100\text{ppm}/^\circ\text{C}$	$\pm 25\text{ppm}/^\circ\text{C}$
25.1 Ω - 50 Ω	D F G J K	C D F G	$\pm 50\text{ppm}/^\circ\text{C}$	$\pm 10\text{ppm}/^\circ\text{C}$
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

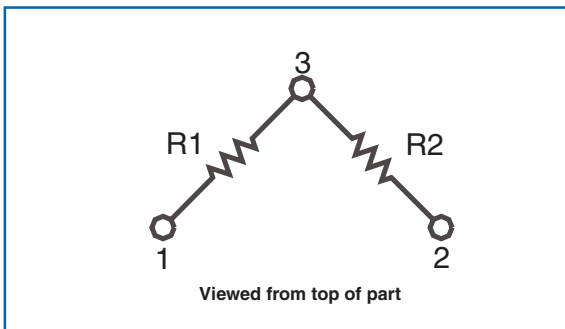
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DIV23 Series

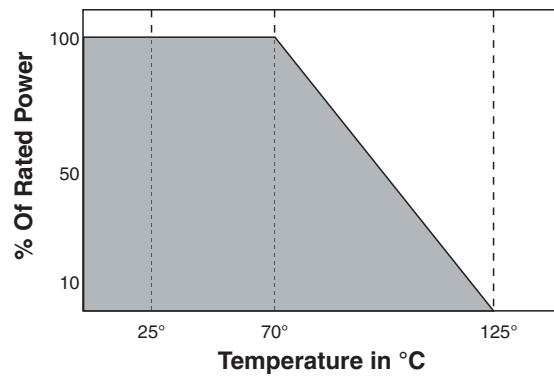
Physical Data



Schematic Data



Power Derating Data



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Ordering Procedure

This product has two valid part numbers:

European (Welwyn) Part Number: D23-1K0-3K3FB (25ppm/°C, R1=1 kilohm, R2=3.3 kilohms, absolute tolerance ±1%, ratio tolerance ±0.1%, Pb-free)

D	2	3	-	1	K	0	-	3	K	3	F	B
1	2	3	4	5	6	7						

1 Type	2 Absolute TCR	3 Value R1	4 Value R2	5 Absolute Tolerance	6 Ratio Tolerance	7 Termination & Packing
D23 = DIV23	Omit for ±25ppm/°C	E24 = 3/4 characters E96 = 3/4 characters R = ohms K = kilohms		B = ±0.1%	A = ±0.05%	Omit for Pb-free, Standard pack PB = SnPb finish, Standard pack 1000/reel
	02 = ±50ppm/°C			C = ±0.25%	B = ±0.1%	
	01 = ±100ppm/°C			D = ±0.5%	C = ±0.25%	
	00 = ±250ppm/°C			F = ±1%	D = ±0.5%	
				G = ±2%	F = ±1%	
			J = ±5%	G = ±2%		
			K = ±10%			

Note that this is equivalent to the legacy part number **SOT23-3K3-1K0FB** in which positions of R1 and R2 were transposed.

USA (IRC) Part Number: SOT-DIV23LF-03-1001-3301-FB (25ppm/°C, R1=1 kilohm, R2=3.3 kilohms, absolute tolerance ±1%, ratio tolerance ±0.1%, Pb-free)

S	O	T	-	D	I	V	2	3	L	F	-	0	3	-	1	0	0	1	-	3	3	0	1	-	F	B
1	2	3	4	5	6	7	8																			

1 Family	2 Model	3 Termination	4 Absolute TCR	5 Value R1	6 Value R2	7 Absolute Tolerance	8 Ratio Tolerance	Packing
SOT	DIV23	Omit for SnPb (60/40)	03 = ±25ppm/°C	3 digits + multiplier R = ohms for values <100 ohms	B = ±0.1%	A = ±0.05%	1000/reel	
			02 = ±50ppm/°C			C = ±0.25%		
			01 = ±100ppm/°C			D = ±0.5%		
		LF = Pb-free (100%Sn)	00 = ±250ppm/°C	F = ±1%		D = ±0.5%		
				G = ±2%		F = ±1%		
				J = ±5%		G = ±2%		
			K = ±10%					

Note that this is equivalent to the legacy part number **SOT-SOT23LF-03-3301-1001-FB** in which positions of R1 and R2 were transposed.

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