

MSS Series

Silicon Schottky Bridge Quad Diodes



Description

The Aeroflex / Metelics MSS CR Series of Schottky crossover quad diodes are fabricated on N-Type epitaxial substrates using proprietary processes that yield the highest FCOs in the industry. Barrier heights for LO power levels from 3 dBm to +17 dBm are available.

Features

- Available in four barrier heights
- Beam lead or packaged devices
- Hi-Rel screening per MIL-PRF-19500 and MIL-PRF-38534 available

Absolute Maximum Ratings

Parameters	Rating
Reverse Voltage	Rated V_{BR}
Forward Current	50 mA
Operation Temperature	-65 °C to +150 °C
Storage Temperature	-65 °C to +150 °C
Power Dissipation	100 mW per junction at $T_A = 25$ °C, derate linearly to zero at $T_A = +150$ °C
Soldering Temperature (Packaged)	+ 260 °C for 5 sec.
Beam Lead Pull Strength	4 grams minimum

Beam Lead

Electrical Specifications, $T_A = 25$ °C

Model	V_F TYP mV	V_{BR} MIN V	C_J TYP / MAX fF	NF TYP dB	R_D TYP Ω	R_D MAX Ω	Outline
MSS30, B46-B45	300	3	0.10 / 0.13	6	20	25	B45
MSS30, B53-B45	270	3	0.20 / 0.25	6	10	15	B45
MSS40, B46-B45	470	3	0.10 / 0.13	6	20	25	B45
MSS40, B53-B45	430	3	0.20 / 0.25	6	10	15	B45
MSS50, B46-B45	530	3	0.10 / 0.13	6	15	20	B45
MSS50, B53-B45	500	3	0.20 / 0.25	6	10	15	B45
MSS60, B46-B45	670	3	0.10 / 0.13	6	20	25	B45
MSS60, B53-B45	670	3	0.20 / 0.25	6	13	18	B45
Test Conditions	$I_F = 1$ mA	$I_R = 10$ μ A	$V_R = 0$ V $F = 1$ MHz		$I_F = 5$ mA		

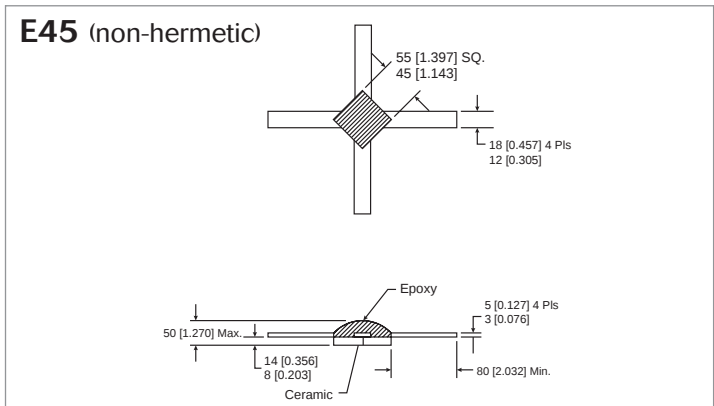
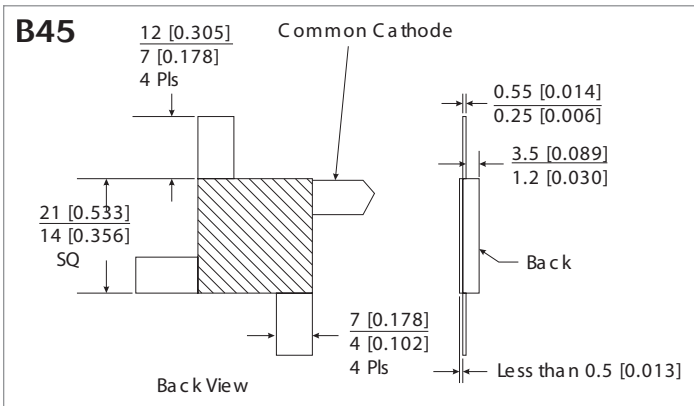


Packaged

Electrical Specifications, $T_A = 25^\circ\text{C}$

Model	V_F TYP mV	V_{BR} MIN V	C_T TYP / MAX fF	NF TYP dB	R_D TYP Ω	R_D MAX Ω	Outline
MSS30, B46-E45	300	3	0.15 / 0.20	6	20	25	E45
MSS30, B53-E45	270	3	0.25 / 0.33	6	10	15	E45
MSS40, B46-E45	470	3	0.15 / 0.20	6	20	25	E45
MSS40, B53-E45	430	3	0.25 / 0.33	6	10	15	E45
MSS50, B46-E45	530	3	0.15 / 0.20	6	15	20	E45
MSS50, B53-E45	500	3	0.25 / 0.33	6	10	15	E45
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MSS50, B60-E45	670	3	0.25 / 0.33	6	13	18	E45
Test Conditions	$I_F = 1\text{ mA}$	$I_R = 10\text{ }\mu\text{A}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$		

Outline Drawings



Aeroflex / Metelics

Aeroflex Microelectronic Solutions
975 Stewart Drive, Sunnyvale, CA 94085
TEL: 408-737-8181
Fax: 408-733-7645

www.aeroflex-metelics.com

sales@eroflex-metelics.com

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.