

# MSS CR Series

## Silicon Schottky Crossover 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

- Five different 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	$C_j$ TYP pF	$C_j$ MAX pF	$R_D$ TYP $\Omega$	$R_D$ MAX $\Omega$	Outline
MSS30, CR46-B49	280	0.09	0.125	15	22	B49
MSS30, CR53-B49	260	0.15	0.250	10	15	B49
MSS40, CR46-B49	470	0.09	0.125	15	22	B49
MSS40, CR53-B49	430	0.15	0.250	10	15	B49
Test Conditions	$I_F = 1$ mA	$V_R = 0$ V $F = 1$ MHz		$I_F = 5$ mA		

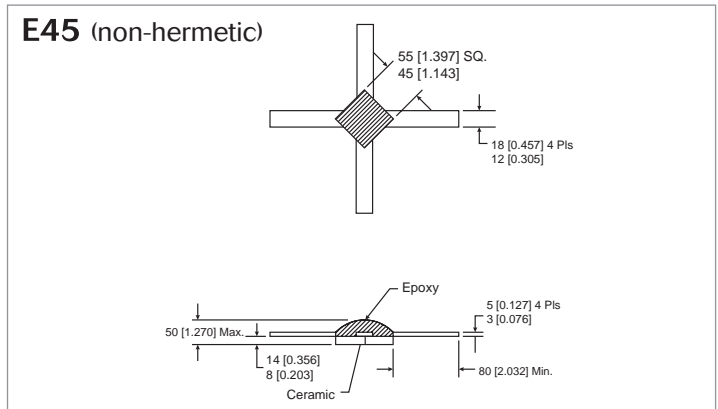
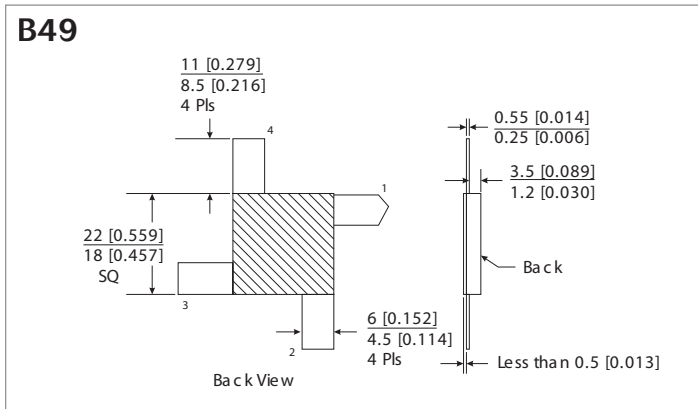


### Beam Lead

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

Model	$V_F$ TYP mV	$C_J$ TYP pF	$C_J$ MAX pF	$R_D$ TYP $\Omega$	$R_D$ MAX $\Omega$	Outline
MSS50, CR46-B49	530	0.09	0.125	15	22	B49
MSS50, CR53-B49	500	0.15	0.250	10	15	B49
MSS60, CR46-B49	620	0.09	0.125	15	22	B49
MSS60, CR53-B49	600	0.15	0.250	12	15	B49
Test Conditions	$I_F = 1\text{ mA}$	$V_R = 0\text{ V}$ $F = 1\text{ MHz}$		$I_F = 5\text{ mA}$		

### 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](http://www.aeroflex-metelics.com)

[sales@eroflex-metelics.com](mailto:sales@eroflex-metelics.com)

Aeroflex / Metelics, Inc. reserves the right to make changes to any products and services herein at any time without notice. Consult Aeroflex or an authorized sales representative to verify that the information in this data sheet is current before using this product. Aeroflex does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by Aeroflex; nor does the purchase, lease, or use of a product or service from Aeroflex convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual rights of Aeroflex or of third parties. Copyright 2003 Aeroflex / Metelics. All rights reserved.



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