# MSS25-xxx-x Series



### P-Type Silicon Schottky Detectors

Rev. V2

#### **Features**

- Close Matching of the Diode Characteristics
- Better Temperature Stability than Zero Bias
- Low Barrier Height
- Passivated with Silicon Nitride



The MSS25-xxx-x Series of Schottky diodes are optimized for superior 1/f noise on P-type silicon epitaxial substrate with proprietary process. In general they require a small forward bias (5  $\sim$  50  $\mu A)$  for small power levels below -30 dBm when used as microwave detectors. At higher powers they can be used as a Zero Bias Detectors.



# Chip & Beam Lead Electrical Specifications @ $T_A$ = 25°C Forward Voltage @ 1 mA = 220 - 330 mV Breakdown Voltage @ 10 $\mu$ A = 3 V min.

Model	Forward Voltage (V <sub>F</sub> )		Junction Capacitance (C <sub>J</sub> )		Dynamic Resistance (R <sub>D</sub> )	Frequency Outline		
	mV		pF		Ω	GHz		
	Тур.	Max.	Тур.	Max.	Max.	Max.		
Chip								
MSS25-047-C15c	260	300	0.08	0.10	65	18	C15c	
MSS25-049-C15c	220	260	0.10	0.12	52	12	C15c	
Beam Lead								
MSS25-141-B10D	280	330	0.06	0.08	65	40	B10D	
MSS25-143-B10D	260	300	0.08	0.10	60	26	B10D	
MSS25-145-B10D	220	260	0.10	0.12	52	18	B10D	
Packaged								
MSS25-141-0402	280	330	0.06	0.08	65	40	0402	
Test Conditions	I <sub>F</sub> = 1 mA		V <sub>R</sub> = 0.2 V, 1 MHz		I <sub>F</sub> = 5 mA	_	_	



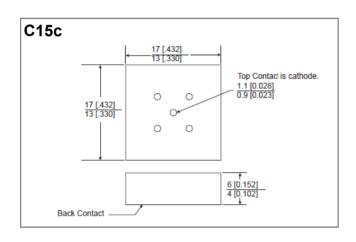
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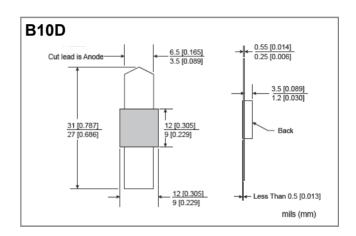
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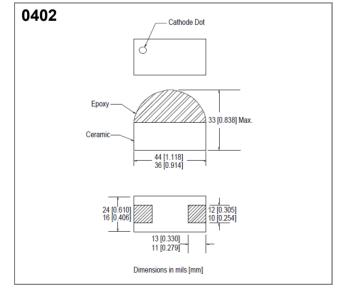
## **Absolute Maximum Ratings**

Parameters	Rating		
Power Dissipation	150 mW per junction, derated linearly to 0 @ T <sub>A</sub> = +150°C		
Operating & Storage Temperature	-65°C to +150°C		
Soldering Temperature	+230°C for 5 seconds		

#### **Outline Drawings**







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