

# SURFACE MOUNT PIN DIODE

UM9401F

## Ceramic Package Commercial Two-Way Radio Antenna Switch Diode

### FEATURES

- High Power Surface Mount Package
- Specified Low Distortion, Low Loss
- Low Bias Current Requirements
- High Zero Bias Impedance
- Compatible with Automatic Insertion Equipment
- Very Low Inductance and Capacitance
- Passivated PIN Diode Chip
- Hermetically Sealed
- Non-Magnetic Package

### DESCRIPTION

With high isolation, low loss, and low distortion characteristics, this Microsemi ceramic package PIN diode is perfect for two-way radio antenna switch applications where size and power handling capability are critical.

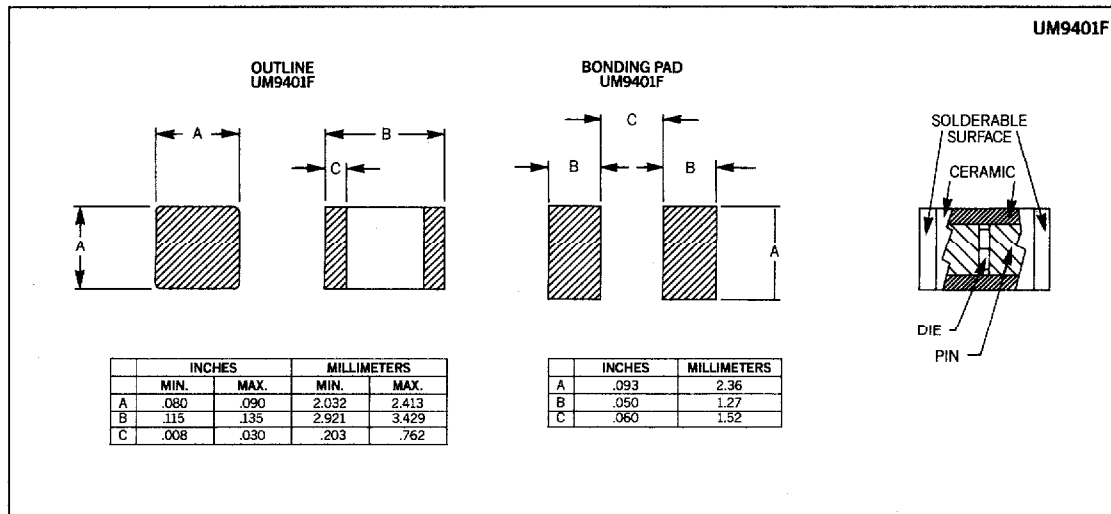
Its advantages also include the low forward bias resistance and high zero bias impedance that are essential for low loss, high isolation and wide bandwidth antenna switch performance. Its square design makes this device ideal for use with automatic insertion equipment.

### ABSOLUTE MAXIMUM RATINGS

Maximum Reverse Voltage	50V
Average Power Dissipation Contact Surfaces @ 25°C	4.0W
Thermal Resistance	
Free Air	1.5W
25°C Contacts	37.5°C/W
Operating and Storage Temperature	-65°C to +175°C

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### MECHANICAL SPECIFICATIONS



**Microsemi Corp.**  
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TEST	CONDITIONS	MIN	TYP	MAX
Series Resistance R <sub>S</sub> , Ohms	F = 100MHz I <sub>F</sub> = 50mA	—	0.5	.75
Capacitance C <sub>T</sub> , pF	F = 1MHz V <sub>R</sub> = 50V	—	0.75	.9
Parallel Resistance R <sub>P</sub> , Ohms	F = 100MHz V = 0V	5K	10K	—
Carrier Lifetime τ, μS	I <sub>F</sub> = 10mA	2.0	4.0	—
Transmit Harmonic Distortion, -dB	P <sub>in</sub> = 50W F = 50MHz I <sub>F</sub> = 50mA	80	—	—
Receive 3rd Order Harmonic Distortion, -dB	F = 100 MHz V = 0V F <sub>A</sub> = 50MHz F <sub>B</sub> = 51MHz	60	—	—
Voltage Rating V <sub>R</sub> , Volts	I <sub>R</sub> = 1μA	50	—	—
Forward Voltage V <sub>F</sub> , Volts	I <sub>F</sub> = 50mA	—	.80	1.0

