UM9401F

PIN DIODE
SWITCHING DIODE-Ceramic Surface Mount

RoHS Compliant Version Available

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. The surface mount package is ideal for high volume automated assembly applications.

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.

IMPORTANT:
For the most current data, consult our website: ***www.MICROSEMI.com***

ABSOLUTE MAXIMUM RATINGS AT 25º C (UNLESS OTHERWISE SPECIFIED)

Parameter	Symbol	Limits	Units
Maximum Reverse Voltage	V_R	50	V
Average Power Dissipation	P_D	4	W
Storage Temperature Range	T_{STG}	-65 to 175	°C
Operating Temperature Range	T_{OP}	- 65 to 175	°C
Thermal resistance. (25 °C contacts, free	R_θ	37.5	°C/W



KEY FEATURES

- High Power Surface Mount Package.
- Specified low distortion, low loss.
- Low bias current requirements.
- High zero bias impedance.
- Low inductance and capacitance.
- Compatible with automatic insertion equipment.
- RoHS compliant packaging Available[1]

APPLICATIONS/BENEFITS

- Low Loss T/R Switching.
- Two Way Radio Antenna Switching.
- Available on Tape&Reel

[1] The UX9401F is supplied with a RoHS compliant matte tin finish.

Consult factory for details.

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Rev. A, 2009-02-19

Microsemi
Microwave Products
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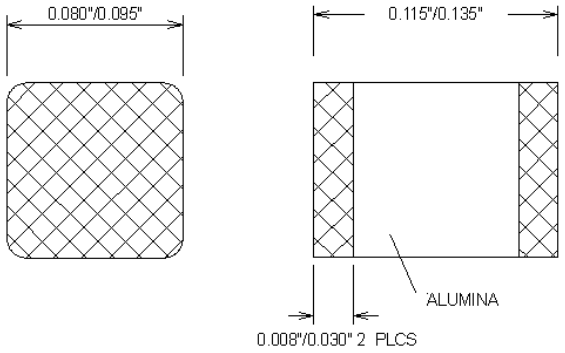
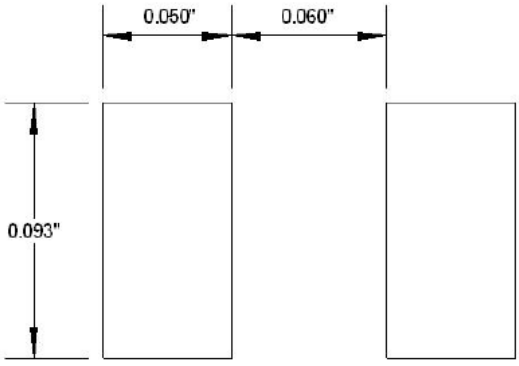
ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)

Parameter	Symbol	Conditions	MIN.	TYPICAL	MAX	Units
Total Capacitance	C_T	V_R = 50V, F = 1 MHz		0.75	0.9	pF
Series Resistance	R_S	I_F = 50 mA, F = 100 MHz		0.5	0.75	Ohms
Parallel Resistance	R_P	f = 100MHz, Vr = 0V	5	10		kOhms
Carrier Lifetime	T_L	I_F = 10 mA	2	4		µs
Reverse Current	I_R	V_R = 50			10	µA
Forward Voltage	V_F	I_F = 100mA			1.0	V
Transmit Harmonic Distortion		P_{IN} = 50 W F = 50 MHz I_F = 50 mA	80			-dB
Receive 3rd Order Harmonic Distortion		F = 100 MHz V = 0 V F_A = 50 MHz F_B = 51 MHz	60			-dB

PACKAGE STYLE 'F'



FOOTPRINT



NOTES:
1. These dimensions will match the terminals and provide for additional solder fillets at the outboard ends at least as wide as the terminals themselves, assuming accuracy of placement within 0.005"
2. If the mounting method chosen requires use of an adhesive separate from the solder compound, a round (or square) spot of cement should be centrally located.

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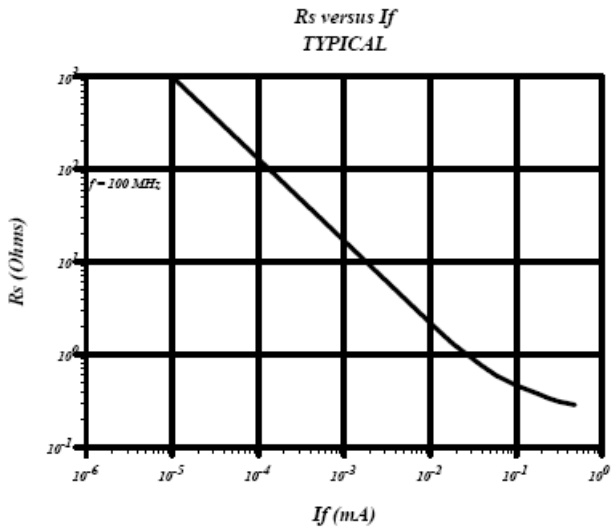
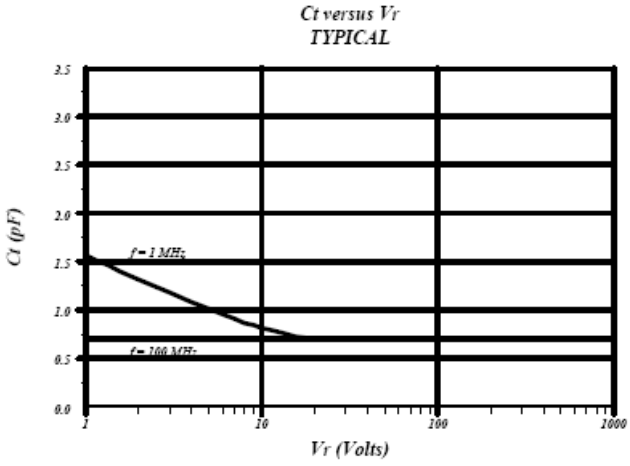
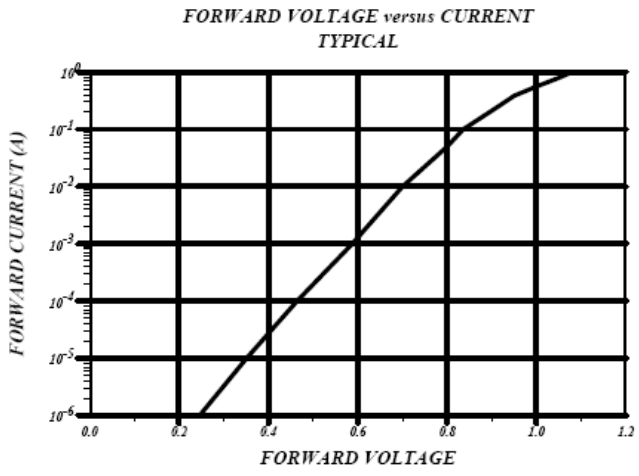
TYPICAL RS VS IF



TYPICAL CT VS VR



IF CURVE



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