

**DESCRIPTION**

Our EPSM packaged devices are designed for the most demanding commercial and Military requirements where the inconsistency of performance inherent in plastic surface mount packages cannot be tolerated. These package styles extend the surface mount construction format to 6 GHz for high performance wireless applications including VCO's, limiters, pin switches and pin attenuators. Select PIN diodes for switching, attenuation or limiting through 6 GHz. They are available in multiple chip configuration as well as outlines which directly replace SOT-23 and SOD-323 devices. Other devices and values are always available - contact our applications engineering department for more details.

**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

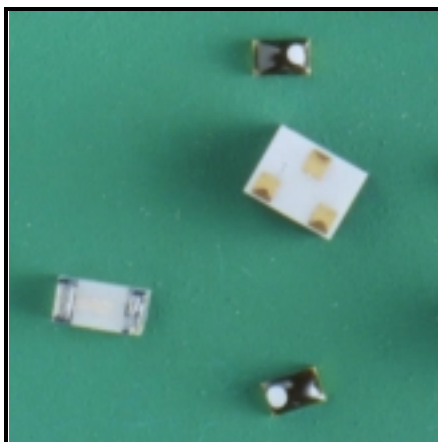
**PIN DIODE DEVICES FOR WIRELESS ATTENUATORS,  
SWITCHES AND LIMITERS**

**ABSOLUTE MAXIMUM RATINGS AT 25°C**

- Forward Current ( $I_F$ ):** 1 Amp (1 $\mu$ s Pulse)  
**Power Dissipation ( $P_D$ ):** 500 mW  
 (Derate to 0 at max  $T_J$ )  
**Peak Inverse Volts (PIV):** Same as  $V_B$   
**Junction Temp. (Operating):** -65°C to + 125°C  
**Storage Temp. (Non-Operating):** -65°C to + 125°C  
**Leakage:** <50 nA @ 80%  
 $V_B$  @ 25°C

**TEST CONDITIONS:**

- $V_B$  @ 10  $\mu$ A       $R_S$  @ 100 MHz  
 $C_T$  @ 1 MHz       $T_L$  @  $I_F$  = 10 mA  
 $I_R$  = 6 mA



**KEY FEATURES**

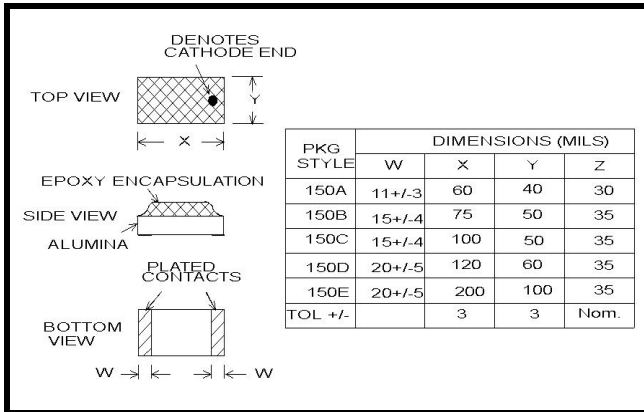
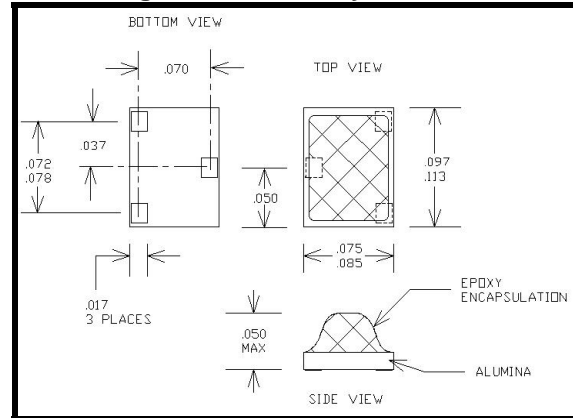
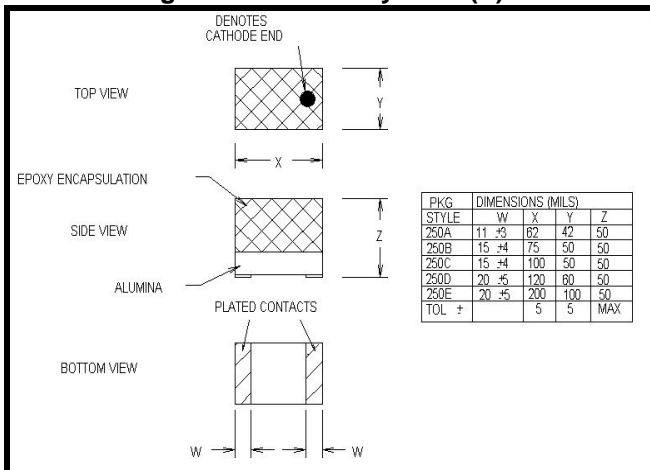
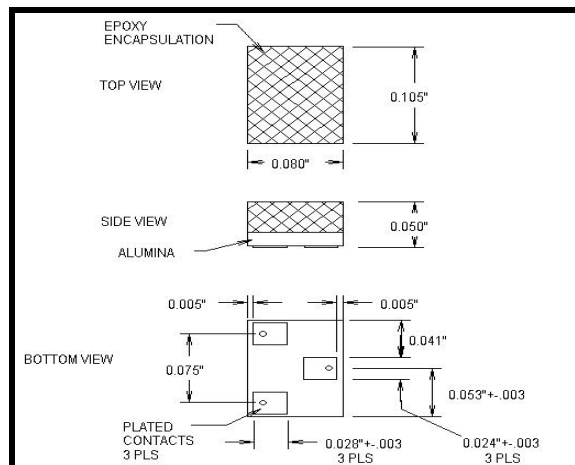
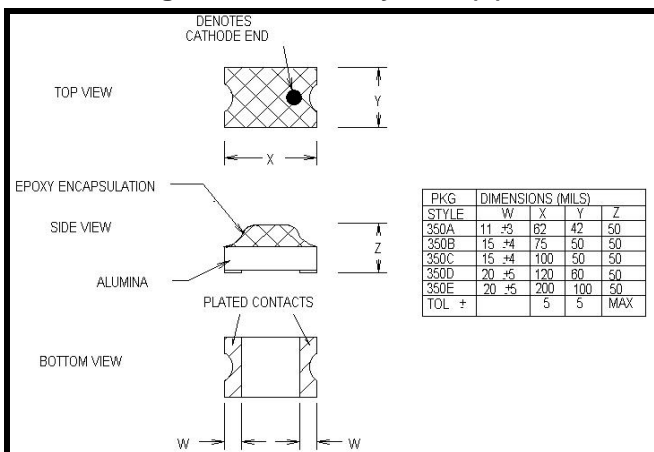
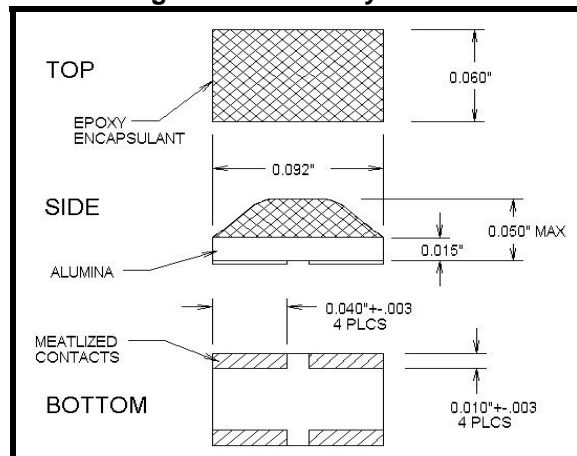
- Frequencies from VHF to 6 GHz
- Lower Parasitics
- Mil Grade Ceramic/Epoxy Amalgam Construction
- Dense SiO<sub>2</sub> Junction Passivation
- Superior Consistency/Repeatability
- Footprints Available for SOT-23/SOD-323/SOD-123
- Priced for Commercial Products
- Tape & Reel for Volume Pick & Place

**APPLICATIONS/BENEFITS**

- High performance wireless surface mounting including:
- GSM
- TAGS
- WANS
- PCS
- AMPS
- DECT
- CELLULAR

**TABLE 1**

MODEL	$V_B$	$C_T$ @ $V_R$ MAX.	$R_S$ @ $I_F$ MAX.	$T_L$ TYP.	APPLIC- TION
LSP1000	> 35	.28 @ 5V	2.5 $\Omega$ @ 5 mA	80nS	SWITCH
LSP1002	> 100	.32 @ 50V	4 $\Omega$ @ 100 mA	1500nS	ATTENU- ATOR
LSP1004	> 35	.75 @ 20V	0.6 $\Omega$ @ 10 mA	150nS	SWITCH
LSP1011	> 200V	.35 @ 50V	2 $\Omega$ @ 100 mA	2000nS	ATTENU- ATOR
LSP1012	> 20V	.35pF @ 10V	1.8 $\Omega$ @ 10 mA	5nS	LIMITER

**EPSM AVAILABLE CONFIGURATIONS**
**Figure 1 Outline Style 150(X)**

**Figure 2 Outline Style 154**

**Figure 3 Outline Style 250(X)**

**Figure 4 Outline Style 254**

**Figure 5 Outline Style 350(X)**

**Figure 6 Outline Style 252A**




MICROWAVE PRODUCTS DIVISION

LSP1000 thru LSP1012

**ENHANCED PERFORMANCE  
SURFACE MOUNT "EPSM" PACKAGED DEVICES**

**PRODUCT PREVIEW**

[www.Microsemi.com](http://www.Microsemi.com)

**NOTES**