Microsemi

MICROWAVE PRODUCTS DIVISION

LSP1000 thru LSP1012

ENHANCED PERFORMANCE SURFACE MOUNT "EPSM" PACKAGED DEVICES

PRODUCT PREVIEW

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**

KEY FEATURES

- Frequencies from VHF to 6 GHz
- Lower Parasitics
- Mil Grade Ceramic/Epoxy Amalgam Construction
- Dense Si_O2 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

PIN DIODE DEVICES FOR WIRELESS ATTENUATORS, SWITCHES AND LIMITERS

ABSOLUTE MAXIMUM RATINGS AT 25°C

Forward Current (I_F): **1 Amp (1µs 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 µA **R_S @ 100 MHz**
C_T @ 1 MHz **T_L @ I_F = 10 mA**
I_R = 6 mA

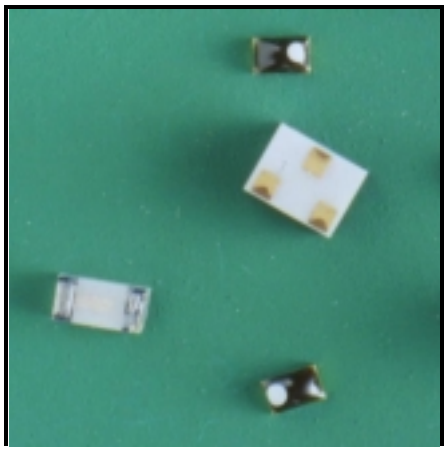

TABLE 1

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

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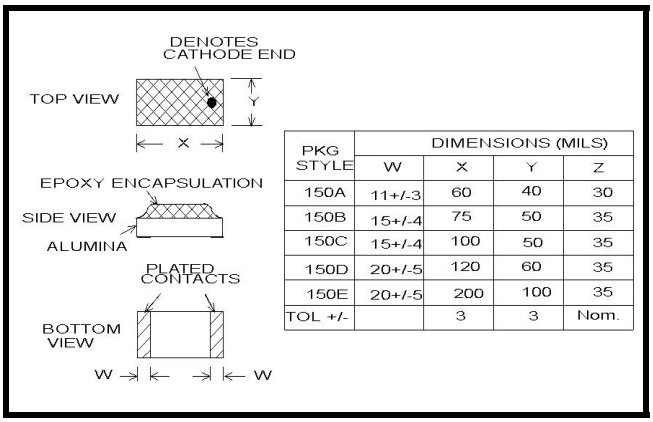
EPSM AVAILABLE CONFIGURATIONS

Figure 1 Outline Style 150(X)



PKG STYLE	DIMENSIONS (MILS)			
	W	X	Y	Z
150A	11+/-3	60	40	30
150B	15+/-4	75	50	35
150C	15+/-4	100	50	35
150D	20+/-5	120	60	35
150E	20+/-5	200	100	35
TOL +/-		3	3	Nom.

Figure 2 Outline Style 154

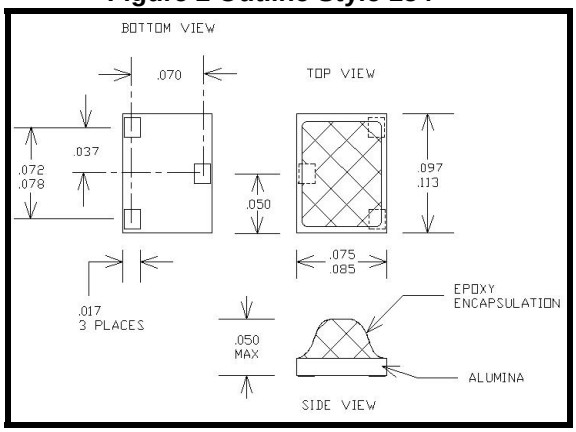
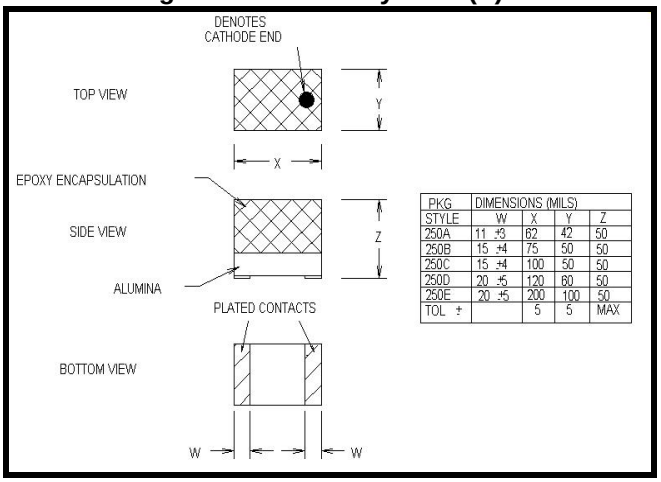


Figure 3 Outline Style 250(X)



PKG STYLE	DIMENSIONS (MILS)			
	W	X	Y	Z
250A	11 ±3	62	42	50
250B	15 ±4	75	50	50
250C	15 ±4	100	50	50
250D	20 ±5	120	60	50
250E	20 ±5	200	100	50
TOL ±			5	5	MAX

Figure 4 Outline Style 254

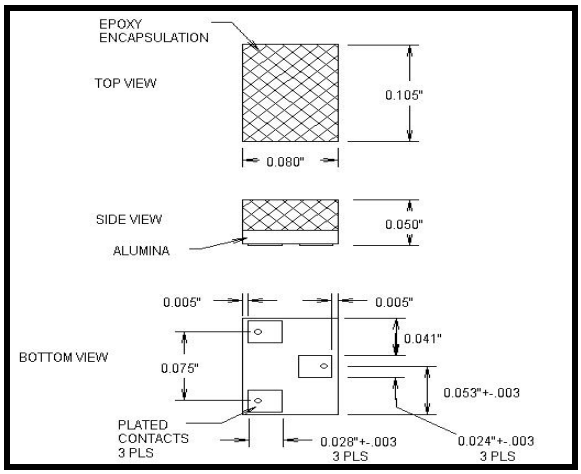
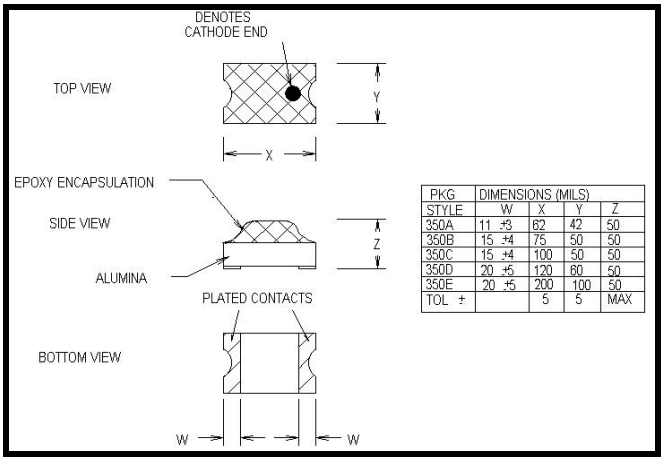
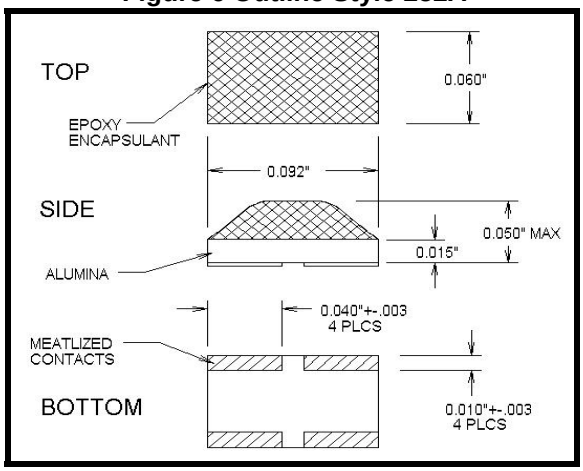


Figure 5 Outline Style 350(X)



PKG STYLE	DIMENSIONS (MILS)			
	W	X	Y	Z
350A	11 ±3	62	42	50
350B	15 ±4	75	50	50
350C	15 ±4	100	50	50
350D	20 ±5	120	60	50
350E	20 ±5	200	100	50
TOL ±			5	5	MAX

Figure 6 Outline Style 252A



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