

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 20 to 40 Volts  
FORWARD CURRENT – 2.0 Ampere**

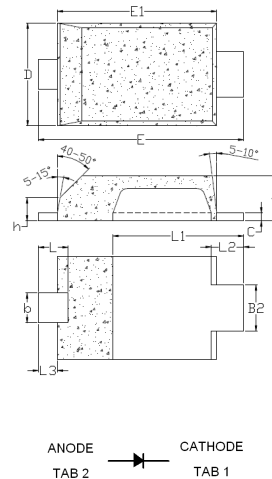
**FEATURES**

- Very low profile package – 0.80mm
- High efficiency
- Extremely fast switching
- Negligible switching losses
- Low forward voltage drop, low power loss

**MECHANICAL DATA**

- Case: JEDEC DO-222AA
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Reliability tested in accordance with AEC-Q101
- Component in accordance to RoHs 2002/95/EC

**Mite Flat**



DO-222AA		
DIM.	MIN.	MAX.
A	0.80	0.95
b	0.40	0.65
b2	0.70	1.00
C	0.10	0.25
D	1.75	2.05
E	3.60	3.90
E1	2.80	3.10
h	0.35	0.50
L	0.50	0.80
L1	2.10	2.60
L2	0.45	0.75
L3	0.20	0.50
All Dimension in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

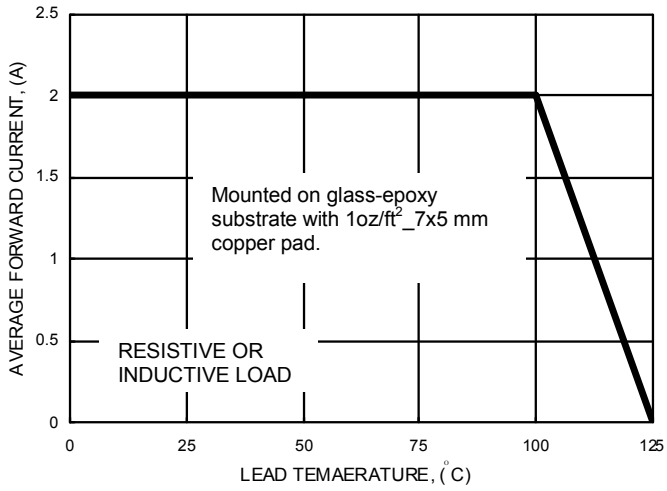
PARAMETER	SYMBOL	FB220M	FB230M	FB240M	UNIT
Device marking code	Note	B22	B23	B24	---
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Average Rectified Output Current @ $T_L=100^\circ C$	$I_{(AV)}$	2.0			A
Peak Forward Surge Current 8.3ms single half sine-wave	$I_{FSM}$	50			A
Operating junction temperature range	$T_J$	-55 to +125			°C
Storage temperature range	$T_{STG}$	-55 to +150			°C
PARAMETER	TEST CONDITIONS	SYMBOL	Max.		UNIT
Forward Voltage (1)	$I_F=2.0A$ $T_j=25^\circ C$	$V_F$	0.50		V
Leakage Current (1)	$V_R=V_{DC}$ $T_j=25^\circ C$ $T_j=85^\circ C$	$I_R$	200 16		$\mu A$ mA
THERMAL CHARACTERISTIC	SYMBOL	Typical		UNIT	
Typical junction capacitance (2)	$C_J$	140		pF	
Typical thermal resistance _ Junction to Case (3)	$R_{\theta JC}$	21		°C/W	
Typical thermal resistance _ Junction to Ambient (3)	$R_{\theta JA}$	60		°C/W	
Typical thermal resistance _ Junction to Lead (3)	$R_{\theta JL}$	22		°C/W	

**Note :**

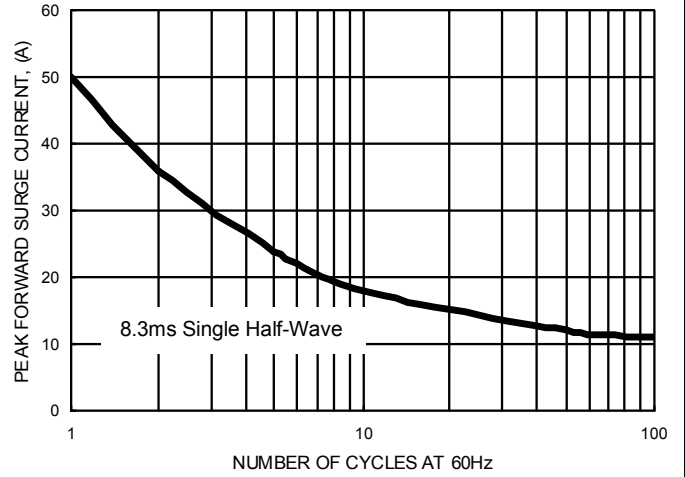
- (1)300us Pulse width, 2% Duty cycle.
- (2)Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (3)Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 0.75t glass-epoxy substrate with 7x5 mm copper pad.  $R_{\theta JL}$  is measured at the lead of cathode band,  $R_{\theta JC}$  is measured at the top centre of body.

**REV. 5, Apr-2014, KSHP03**

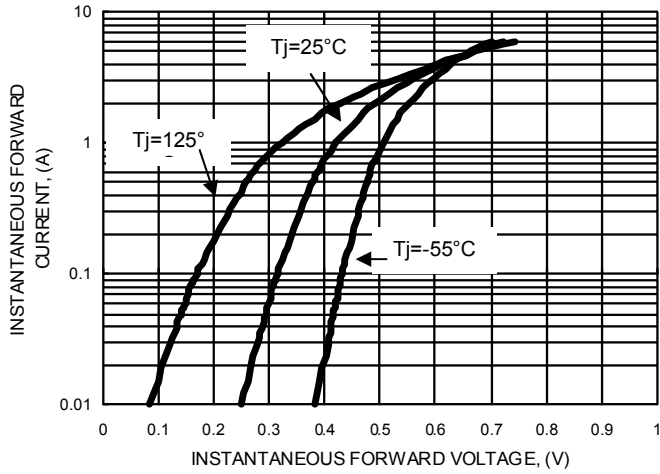
**FIG.1- FORWARD CURRENT DERATING CURVE**



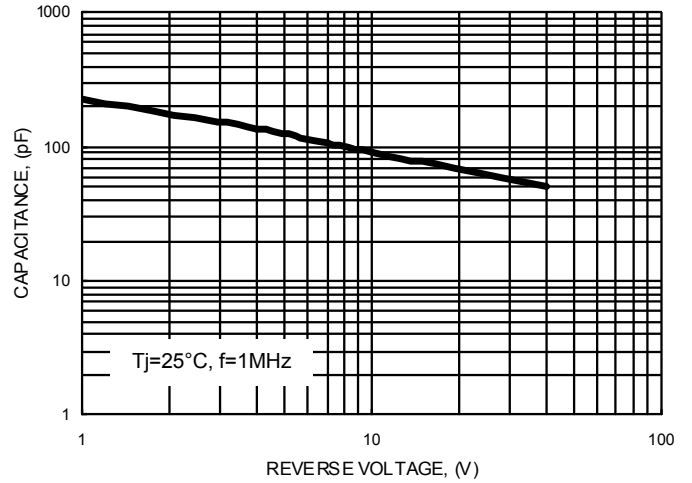
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



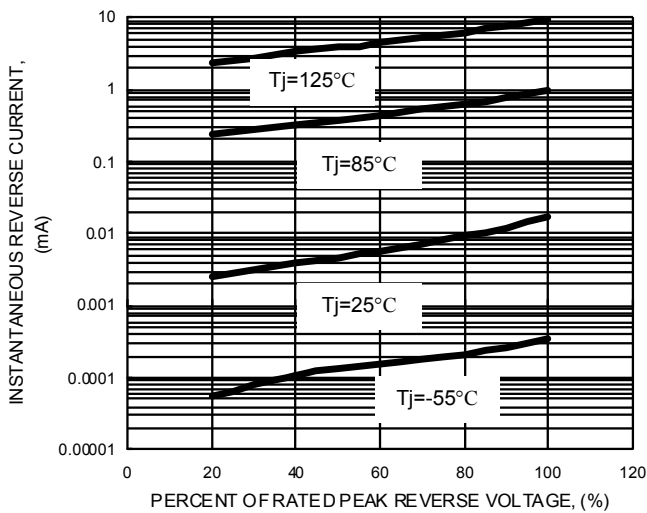
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**

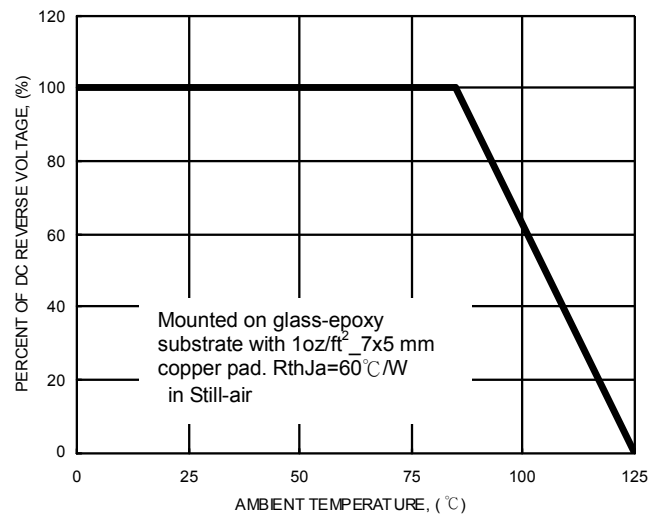
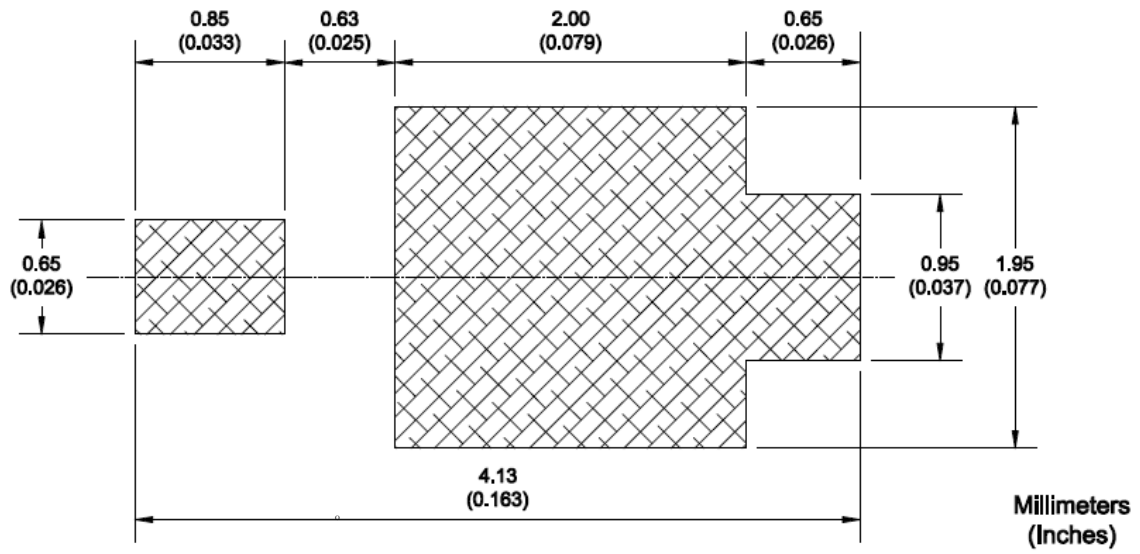


Fig.7 Recommended Foot Print of DO-222AA with Mite Flat



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