

**SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER**

REVERSE VOLTAGE – 40 Volts
FORWARD CURRENT – 2.0 Ampere

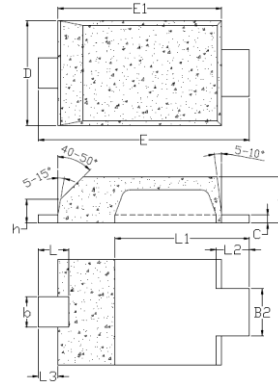
FEATURES

- Very low profile package – 0.80mm
- High efficiency
- Extremely fast switching
- Negligible switching losses
- Low forward voltage drop, low power loss
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

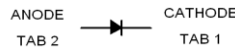
MECHANICAL DATA

- Package: JEDEC DO-222AA
- Package Material: “Green” molding compound, UL flammability classification 94V-0
- 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)



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	FB240M	UNIT	
Device marking code	Note	B24	---	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	40	V	
Maximum RMS Voltage	V _{RMS}	28	V	
Maximum DC Blocking Voltage	V _{DC}	40	V	
Average Rectified Output Current @ _{TL} =100°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 (Note 4)	I _F =2.0A T _j =25°C	V _F	0.50	V
Leakage Current (Note 4)	V _R =V _{DC} T _j =25°C	I _R	200	uA
	T _j =85°C		16	mA
THERMAL CHARACTERISTIC	SYMBOL	Typical	UNIT	
Typical junction capacitance (Note 5)	C _J	140	pF	
Typical thermal resistance _ Junction to Case (Note 6)	R _{θJC}	21	°C/W	
Typical thermal resistance _ Junction to Ambient (Note 6)	R _{θJA}	60	°C/W	
Typical thermal resistance _ Junction to Lead (Note 6)	R _{θJL}	22	°C/W	

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us Pulse width, 2% Duty cycle.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 0.75t glass-epoxy substrate with 7x5 mm copper pad. R_{θJL} is measured at the lead of cathode band, R_{θJC} is measured at the top centre of body.

RATING AND CHARACTERISTIC CURVES
FB240M

FIG.1- FORWARD CURRENT DERATING CURVE

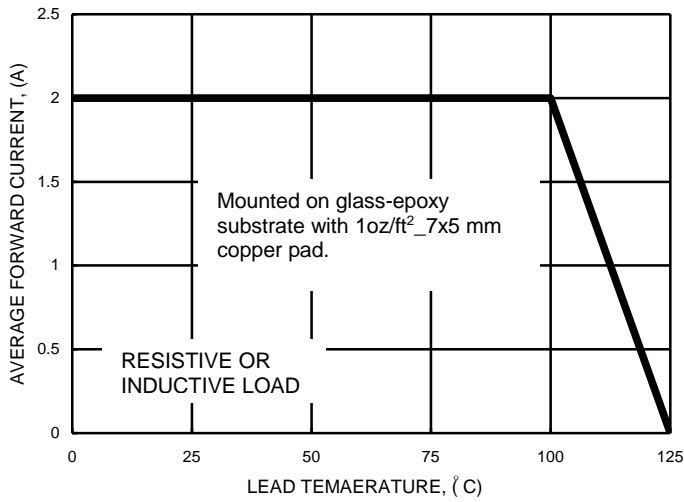


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

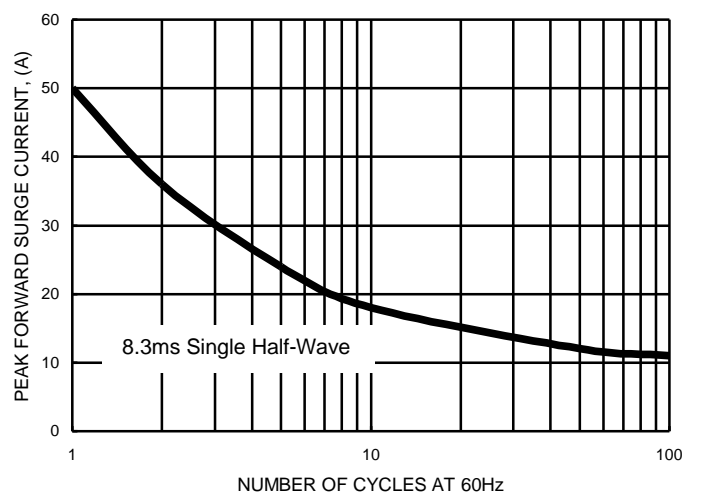


FIG.3- TYPICAL FORWARD CHARACTERISTICS

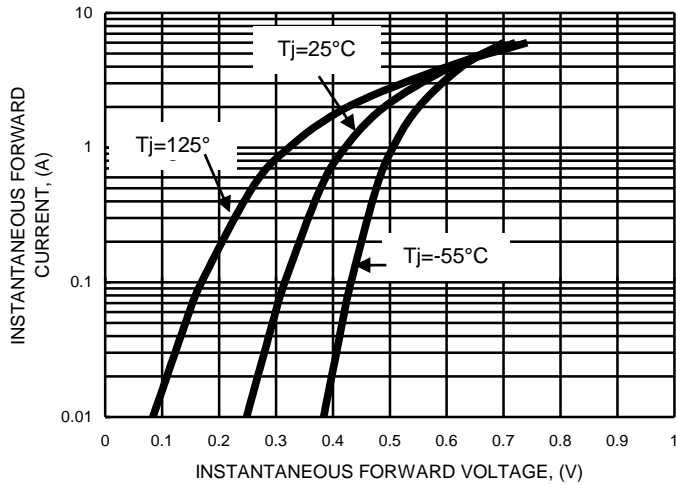


FIG.4- TYPICAL JUNCTION CAPACITANCE

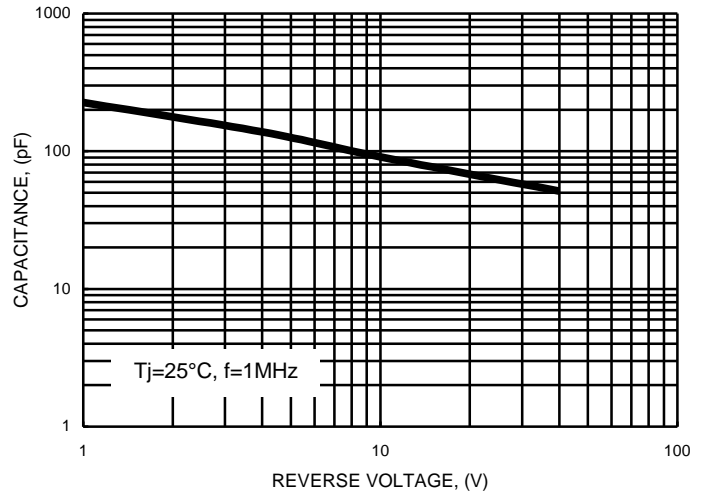


FIG.5- TYPICAL REVERSE CHARACTERISTICS

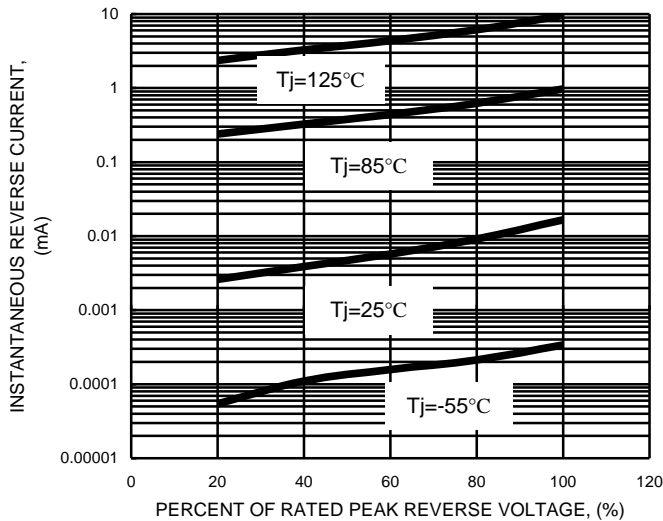
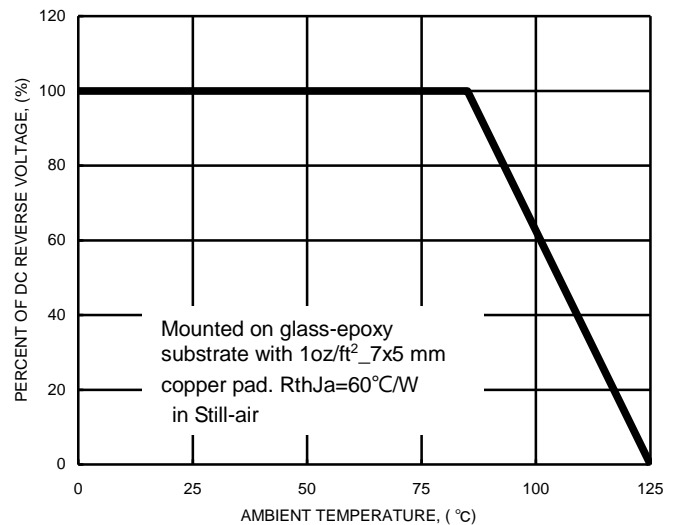


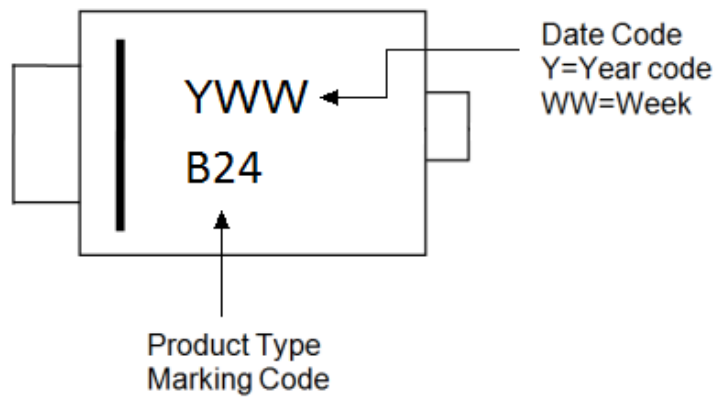
FIG.6- DC REVERSE VOLTAGE DERATING CURVE



Ordering Information:

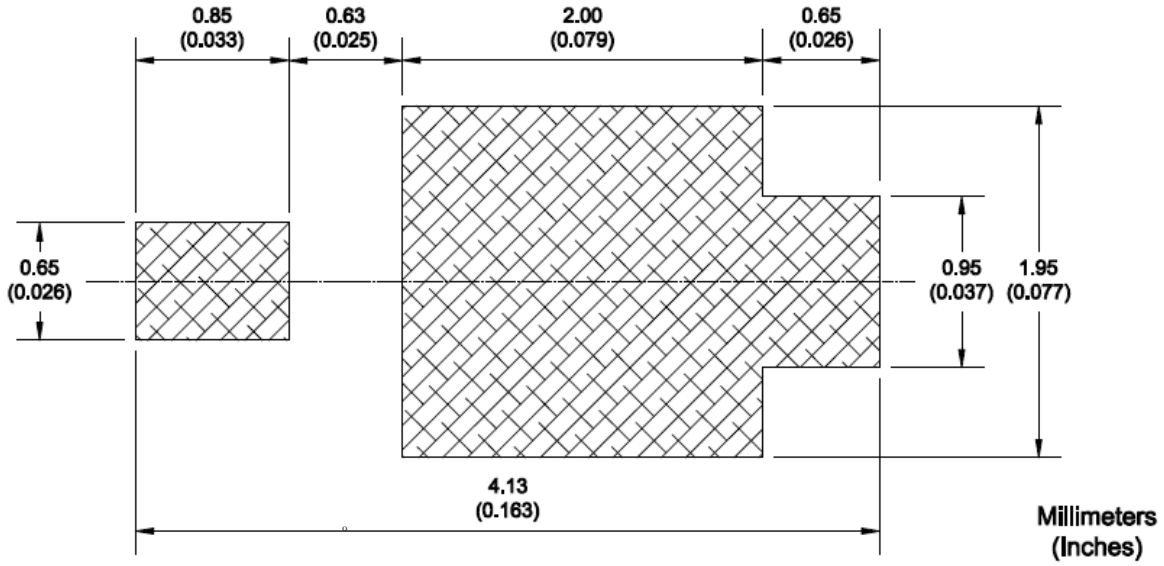
Part Number	Package	Packing	
		Qty.	Carrier
FB240M	DO-222AA	12000	Tape & Reel

Marking Information:



MECHANICS DRAWING
FB240M

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



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