

**SURFACE MOUNT
FAST RECOVERY RECTIFIER**

**REVERSE VOLTAGE – 600 Volts
FORWARD CURRENT – 1 Ampere**

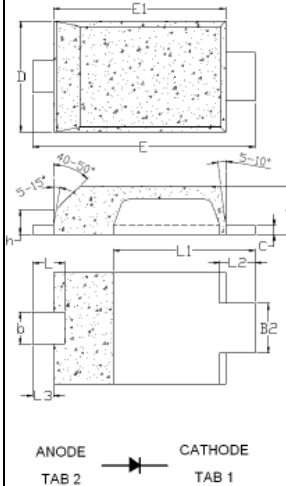
FEATURES

- Very low profile package – 0.80mm
- High efficiency
- Low forward voltage drop, low power loss
- For use in low voltage, high frequency inverters, free wheeling, dc-to-dc converters and polarity protection applications

MECHANICAL DATA

- Case: JEDEC DO-222AA
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.)
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Component in accordance to RoHs 2002/95/EC

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 & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	FES1JM	Units
DC reverse voltage	V _R	600	V
Average Rectified Forward Current	I _O	1	A
Peak Forward Surge Current Single half sine-wave @tp=8.3ms	I _{FSM}	30	A
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Test Condition	Symbol	FES1JM	Unit
Maximum Forward Voltage	I _F = 1A	V _F	1.3	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	V _R = 600V	I _R	5 200	uA
Maximum Reverse Recovery Time	(Note 1)	T _{RR}	35	ns
Typical Junction Capacitance	(Note 2)	C _j	20	pF

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ.	Max.	Unit
Typical thermal resistance Junction to Case (Note 3)	R _{thJC}	-	-	15	°C/W
Junction to Lead (Note 3)	R _{thJL}	-	-	35	

Note: (1) Reverse Recovery Test Condition: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
 (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 glass-epoxy substrate with 1oz/ft² 5 x 7mm copper pad.

FIG.1- FORWARD CURRENT DERATING CURVE

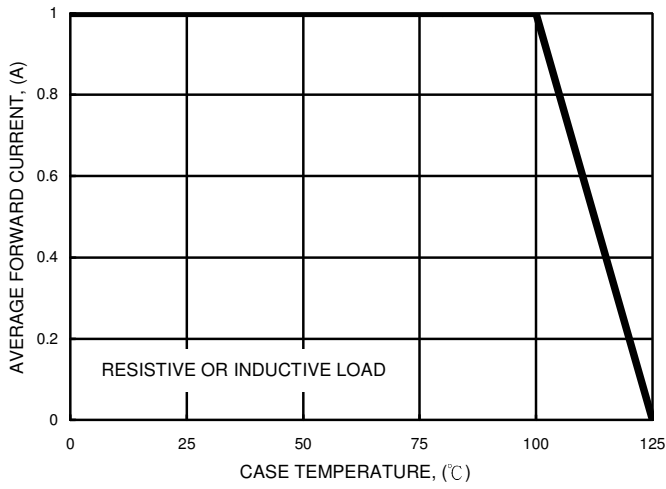


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

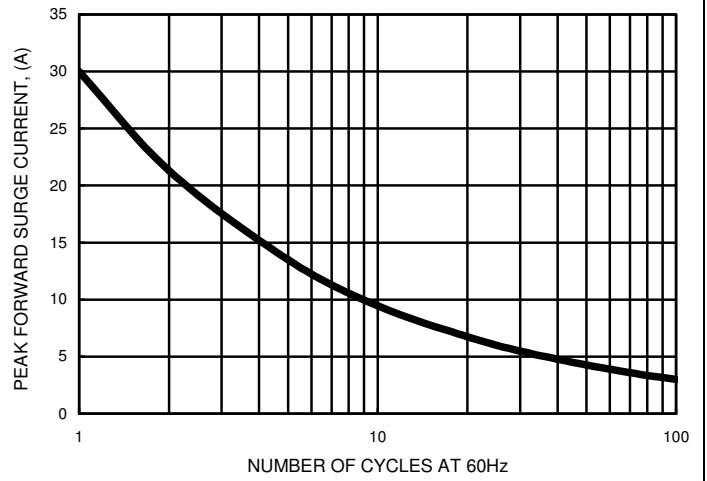


FIG.3- TYPICAL FORWARD CHARACTERISTICS

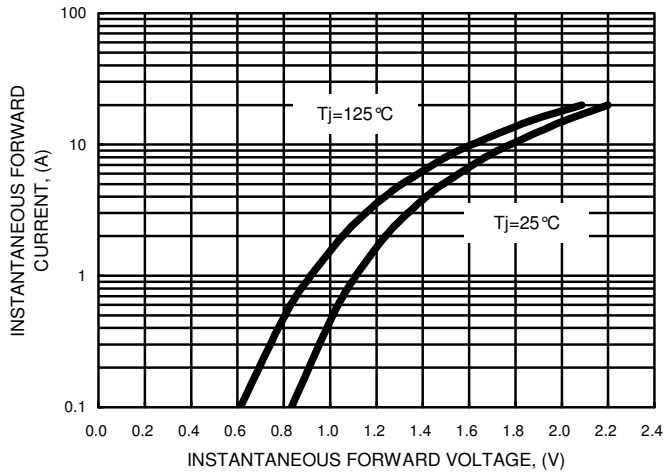


FIG.4- TYPICAL JUNCTION CAPACITANCE

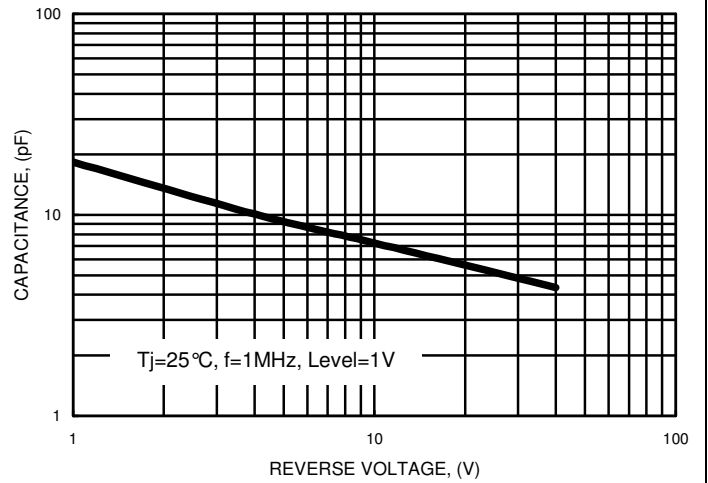
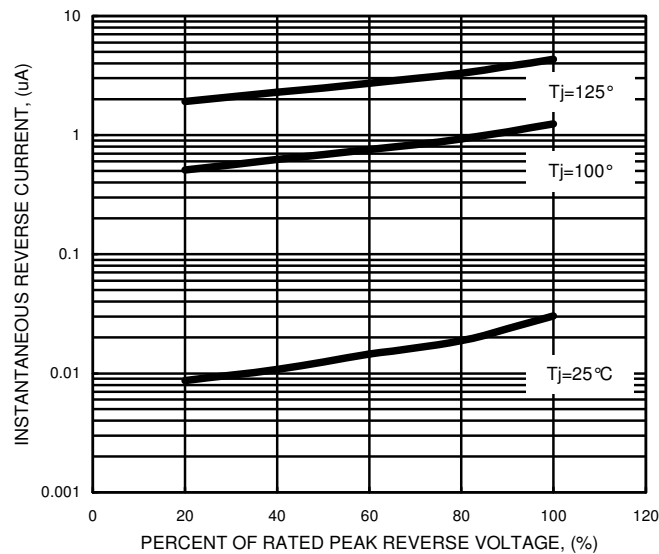


FIG.5- TYPICAL REVERSE CHARACTERISTICS



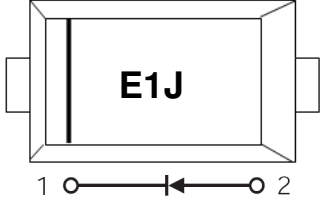
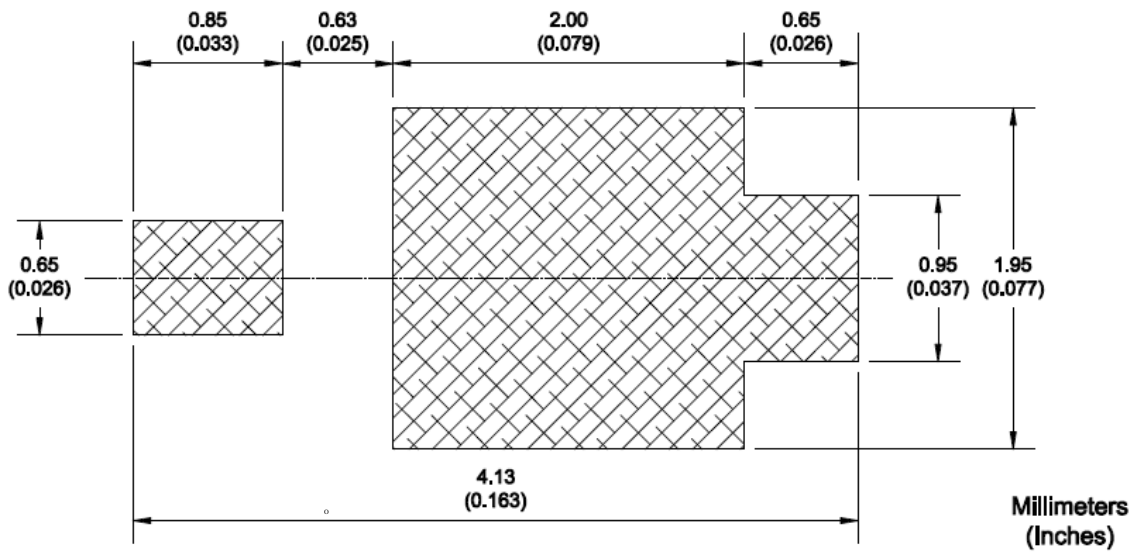
Device P/N	Marking	Equivalent Circuit Diagram
FES1JM	E1J	

Fig.6 Recommended Foot Print of DO-222AA with Mite Flat



Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.

