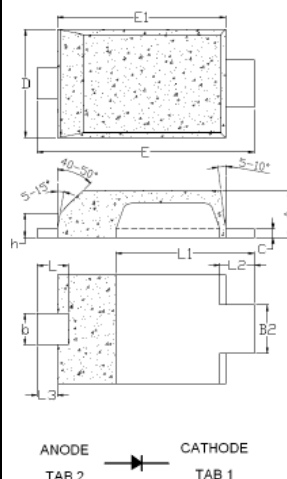


**SURFACE MOUNT
FAST RECOVERY RECTIFIER**
**REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 1 Ampere**
FEATURES

- 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.) "Halogen-free".
- 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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	FRS1MM	Units
DC reverse voltage	V_R	1000	V
Average Rectified Forward Current	I_O	1	A
Peak Forward Surge Current Single half sine-wave @ $t_p=8.3\text{ms}$	I_{FSM}	30	A
Operating Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Test Condition	Symbol	FRS1MM	Unit
Maximum Forward Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	$I_F = 1\text{A}$	V_F	1.3 1.1	V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$	$V_R = 1000\text{V}$	I_R	5 300	μA
Maximum Reverse Recovery Time (Note 1)	(Note 1)	T_{RR}	500	ns
Typical Junction Capacitance	(Note 2)	C_j	6	pF

Thermal Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ.	Max.	Unit
Thermal resistance Junction to Case (Note 3) Junction to Lead (Note 3)	RthJC RthJL	-	-	25 55	$^\circ\text{C}/\text{W}$

 Note: (1) Reverse Recovery Test Condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

(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 7 mm copper pad.

REV. 2, Jul-2014, KSEP02

FIG.1- FORWARD CURRENT DERATING CURVE

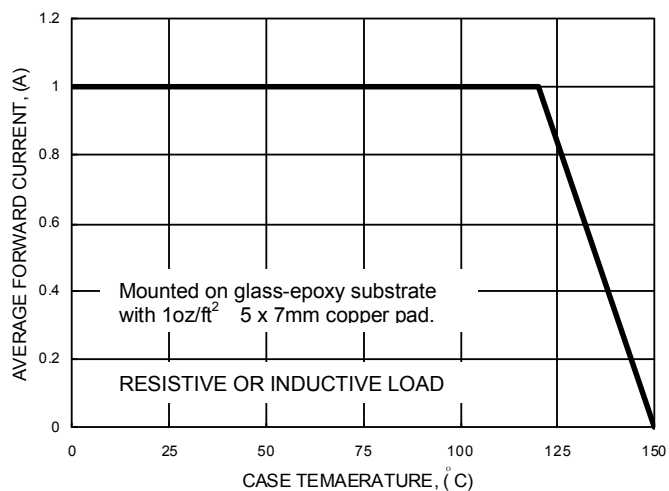


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

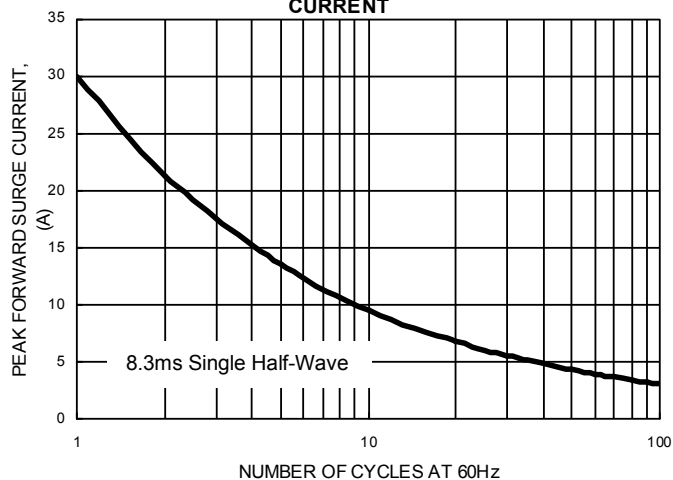


FIG.3- TYPICAL FORWARD CHARACTERISTICS

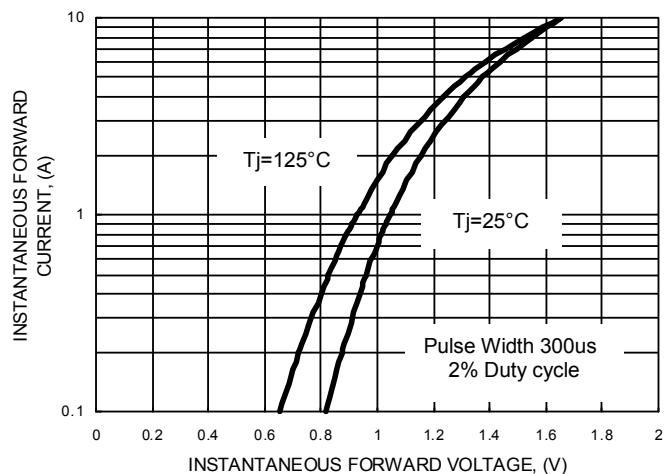


FIG.4- TYPICAL JUNCTION CAPACITANCE

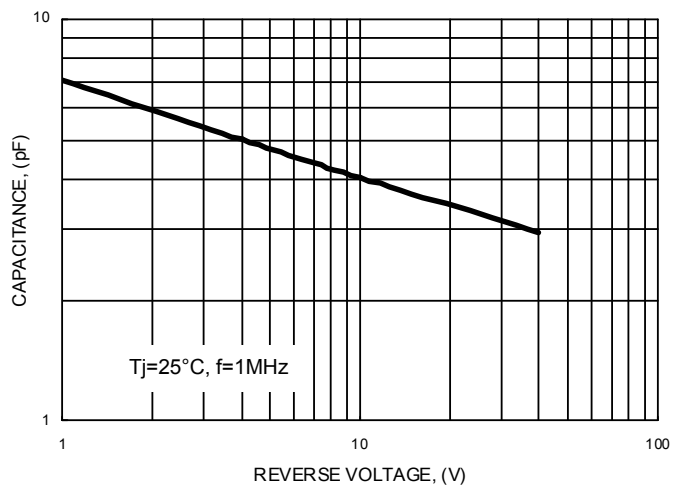
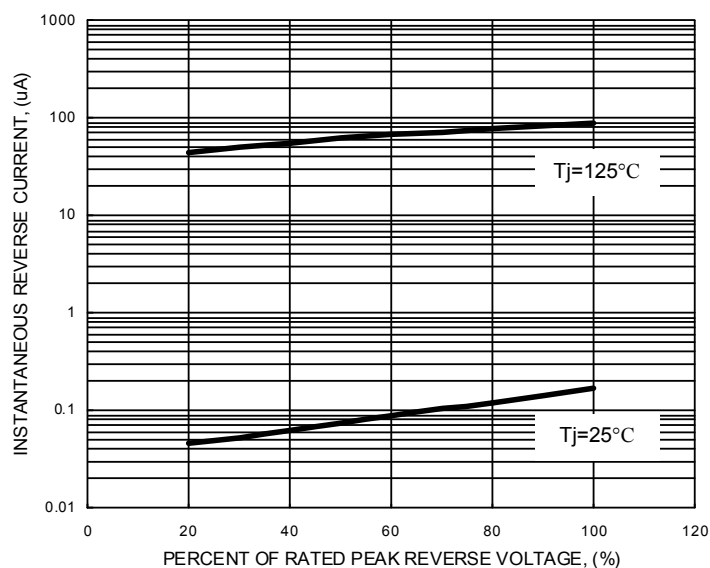


FIG.5- TYPICAL REVERSE CHARACTERISTICS



MARKING & PAD LAYOUT INFORMATION
FRS1MM



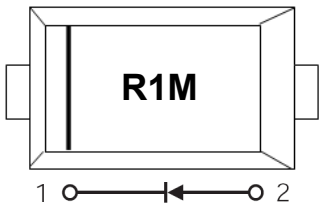
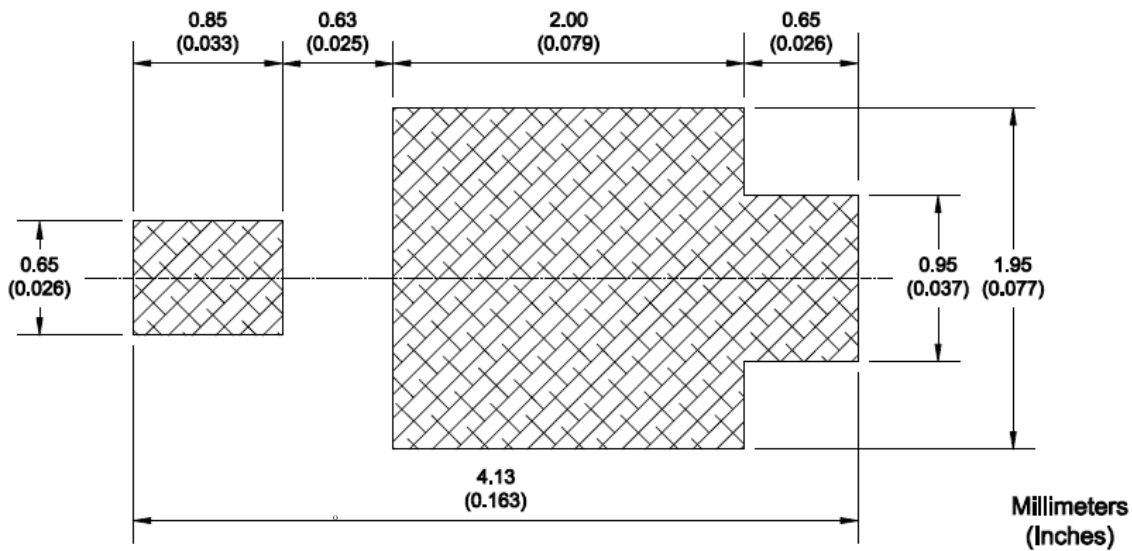
Device Marking:		
Device P/N	Marking	Equivalent Circuit Diagram
FRS1MM	R1M	

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



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