LITE-ON SEMICONDUCTOR

FRS2MD

SURFACE MOUNT
FAST RECOVERY RECTIFIER

REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 2.0Amperes

FEATURES

- Fast switching for high efficiency
- Glass passivated chip
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Qualification is according to AEC-Q101 Rev_C

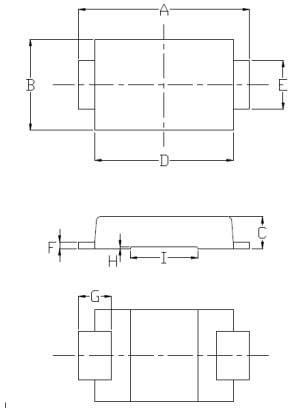
APPLICATION

- Free wheeling, clamping, snubbering, demagnetization in power supplies

MECHANICAL DATA

- Case: JEDEC DO-221AC
- Case Material: “Green” Molding compound, UL flammability classification 94V-0,"Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish)
- Lead Free Finish, RoHS compliant
- Marking: FRS2MD
- Weight: 0.035 grams (Approximate)

F3-D



F3-D			
DIM	MIN	TYP	MAX
A	4.80	5.20	5.60
B	2.25	2.80	2.95
C	0.90	1.00	1.10
D	3.95	4.20	4.60
E	1.25	1.50	1.65
F	0.15	0.20	0.40
G	0.75	1.00	1.50
H	0.025	0.05	0.075
I	1.90	2.05	2.20
All dimension in millimeter			

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	1000	V
Maximum DC blocking voltage		V_{DC}	1000	V
Maximum Average rectified forward current	@Tc = 95°C	$I_{(AV)}$	2.0	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	60	A
Operating and Storage temperature range		T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 1)	I_F = 2.0A	T_J = 25°C	V_F	--	1.3	V
Reverse leakage current	V_R = 1000V	T_J = 25°C T_J=125°C	I_R	--	5 200	uA
Typical junction capacitance (Note 2)			C_J	16		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	$RthJ_C$ $RthJ_L$ $RthJ_a$	25 14 55	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse Recovery Time	I_F=0.5A , I_R=1.0A , I_{rr}=0.25A	T_{rr}	500	nS

Note :

(1) 300us pulse width, 2% duty cycle
(2) Measured at 1.0MHz and applied reverse voltage of 4.0V_{DC}.
(3) Thermal Resistance Junction to Case and Ambient
(4) Thermal Resistance test performed in accordance with JESD-50

REV.-3, Sep.-2019, KSGP18

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RATING AND CHARACTERISTIC CURVES
FRS2MD

LITEON

FIG.1- FORWARD CURRENT DERATING CURVE

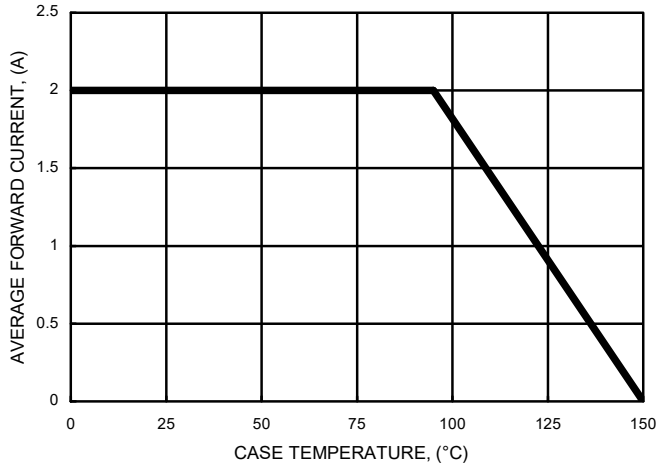


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

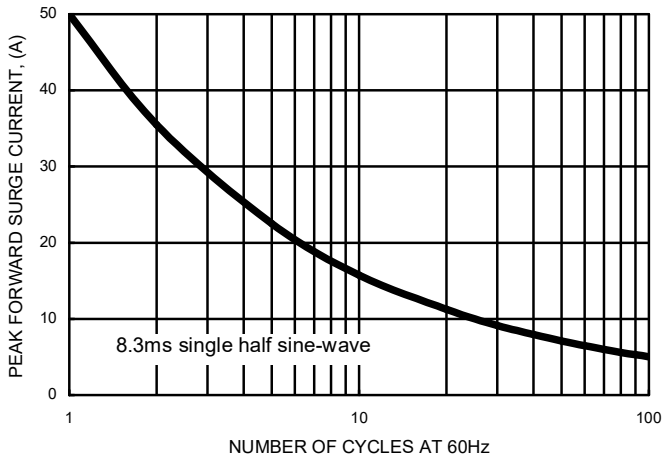


FIG.3- TYPICAL FORWARD CHARACTERISTICS

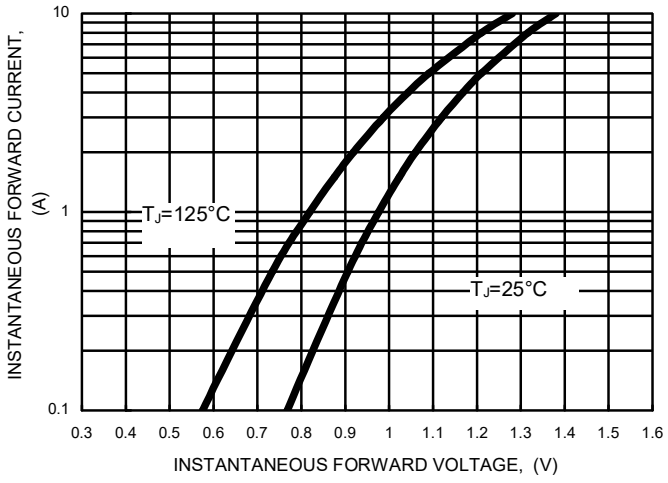


FIG.4- TYPICAL JUNCTION CAPACITANCE

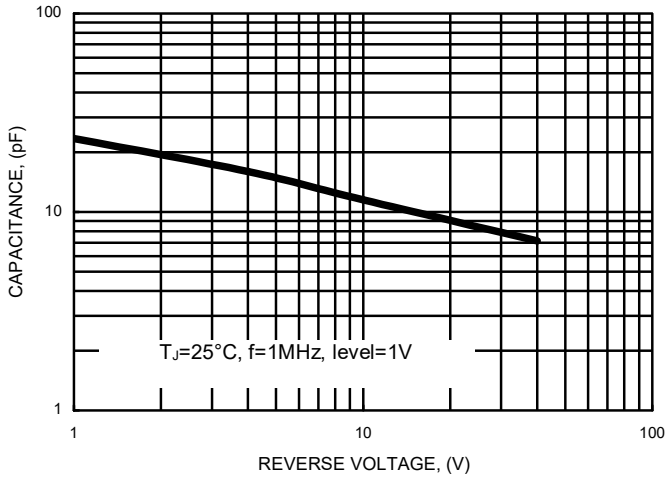
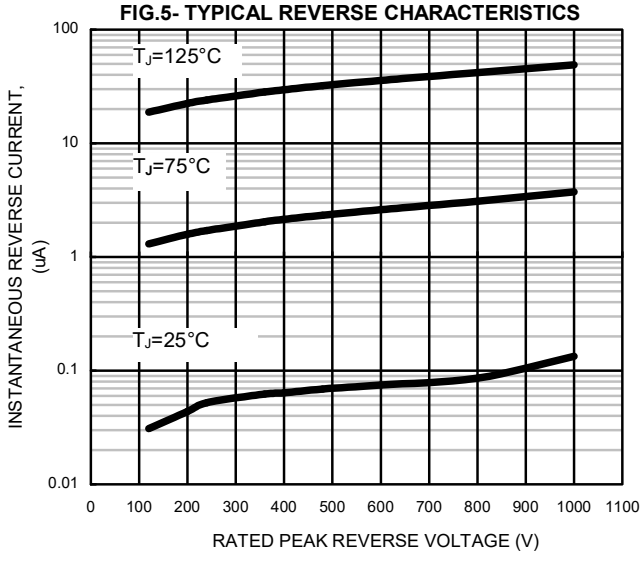
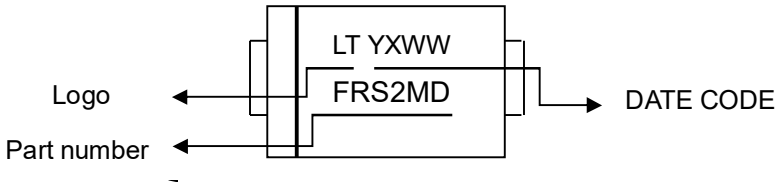


FIG.5- TYPICAL REVERSE CHARACTERISTICS



MARKING AND PACKAGING INFORMATION
FRS2MD

Marking Information



Packaging Information:

DEVICE	Q'TY/REEL (PCS)	REEL DIA. (INCH)	Q'TY/BOX (PCS)	Q'TY/CARTON (PCS)
FRS2MD	10000	13	10000	120K

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