LITE-ON SEMICONDUCTOR

FRS2MD

SURFACE MOUNT FAST RECOVERY RECTIFIER

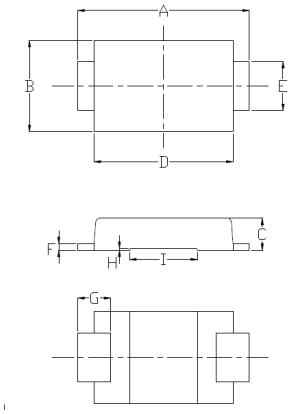
REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 2.0Amperes

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, (No Br. Sb. Cl.) "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℃ ambient temperature unless otherwis e 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℃	V_F	--	1.3	V
Reverse leakage current	V_R = 1000V	T_J = 25℃ T_J=125℃	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 4.0$V_{DC.}$
(3) Thermal Resistance Junction to Case and Ambient
(4) Thermal Resistance test performed in accordance with JESD-50

REV. 2, Jun.-2016, KSGP18

RATING AND CHARACTERISTIC CURVES
FRS2MD

FIG.1- FORWARD CURRENT DERATING CURVE

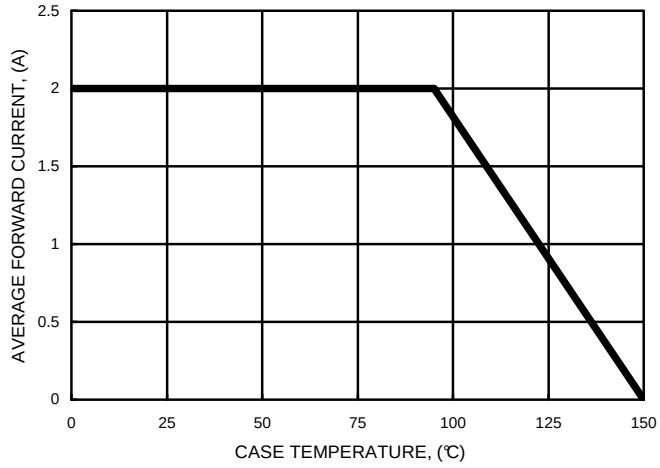


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

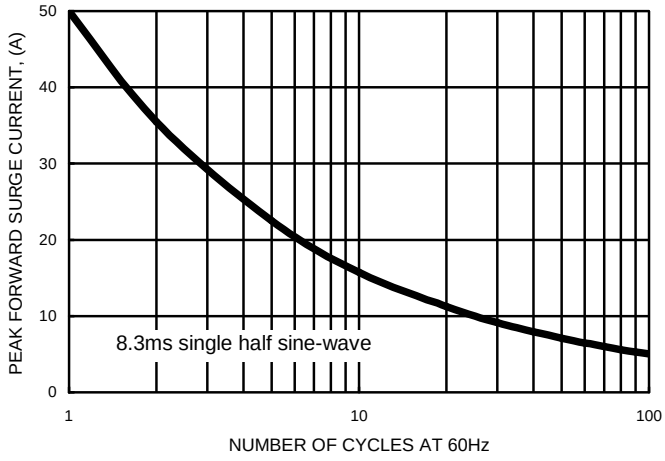


FIG.3- TYPICAL FORWARD CHARACTERISTICS

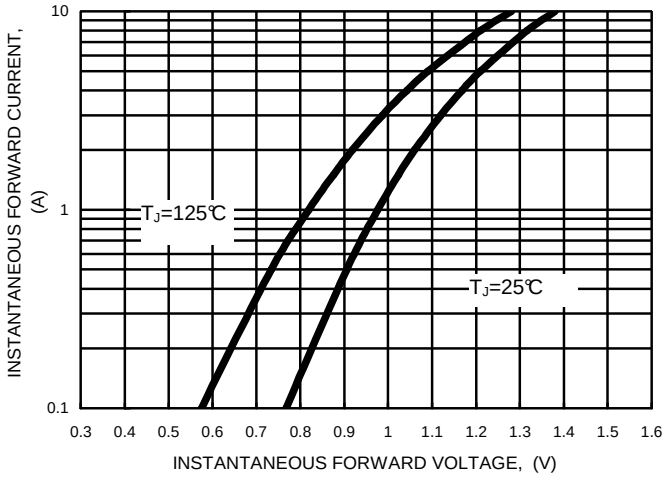


FIG.4- TYPICAL JUNCTION CAPACITANCE

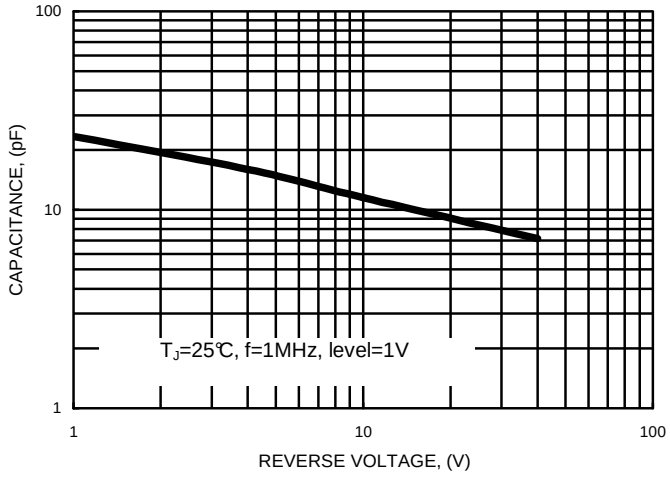
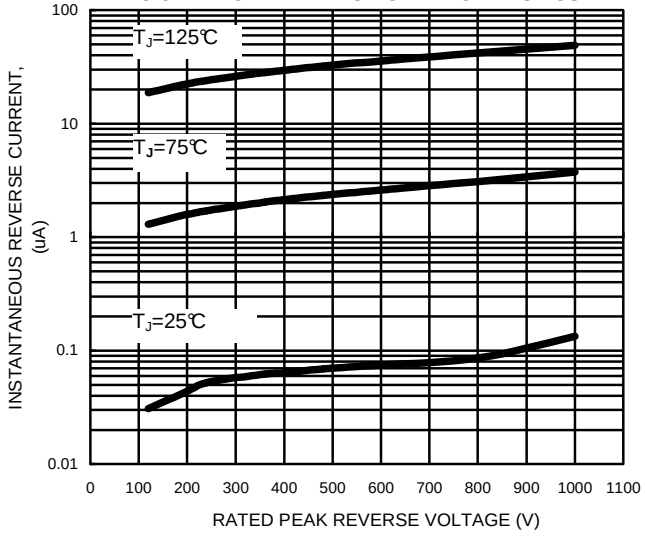
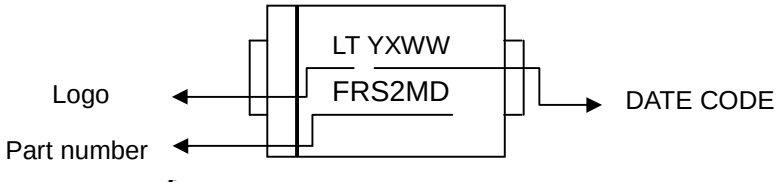


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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

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.