RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

FSM101 THRU FSM107

SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

Discontinued

FEATURES

* Glass passivated device
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.015 gram

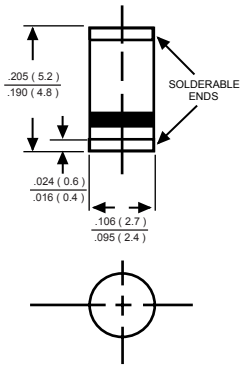
MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0

DISCONTINUED-

"This series is replaced by the FFM10X series that meets to the same fit and function parameters and share the same solder pad layout. The FFM10X series is preferred for error-free vacuum pick-up and PCB assembly."

MELF



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	FSM101	FSM102	FSM103	FSM104	FSM105	FSM106	FSM107	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 55°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	75							°C/W
	$R_{\theta JL}$	30							
Typical Junction Capacitance (Note 2)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	FSM101	FSM102	FSM103	FSM104	FSM105	FSM106	FSM107	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	2.0							mAmps
	@T_A = 100°C		100							
Maximum Reverse Recovery Time (Note 1)		trr	150				250	500		nSec

NOTES : 1. Reverse Recovery Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A

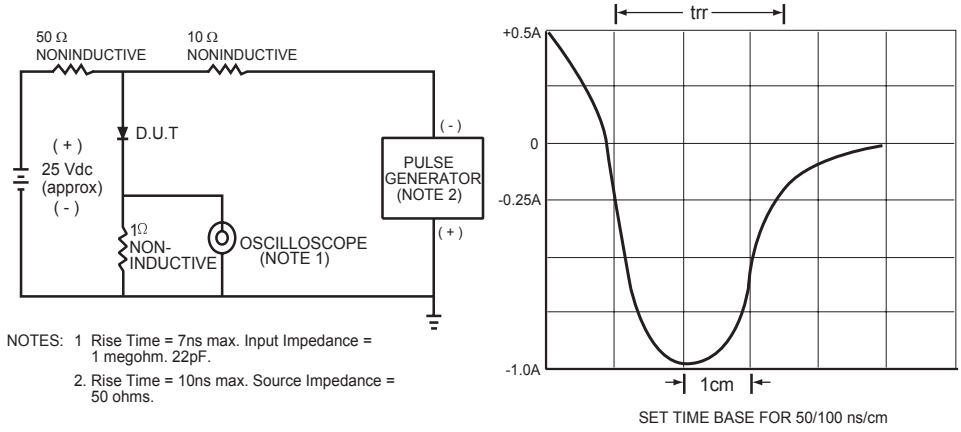
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

4. Thermal Resistance : Mounted on PCB.

2007-4

RATING AND CHARACTERISTICS CURVES (FSM101 THRU FSM107)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

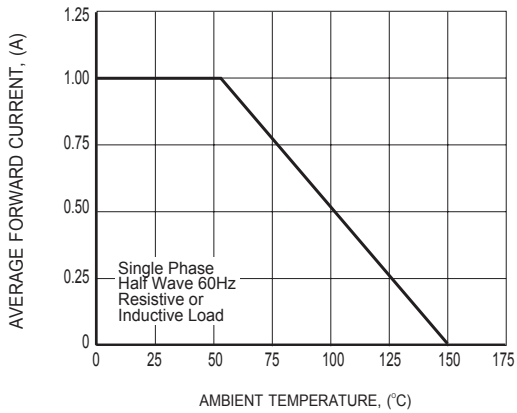


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

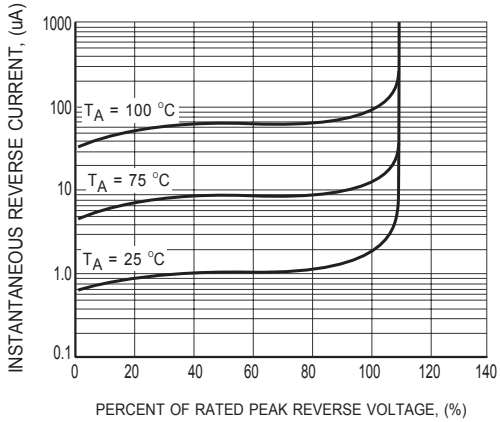


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (FSM101L THRU FSM107L)

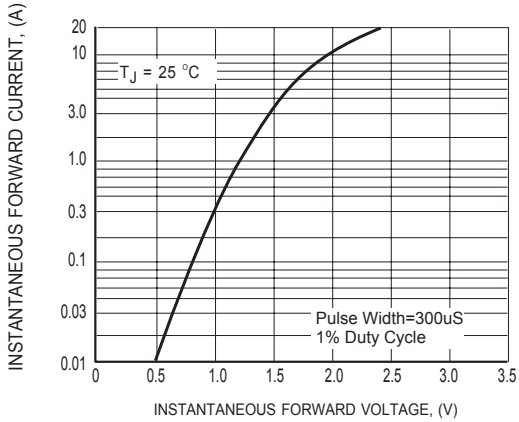


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

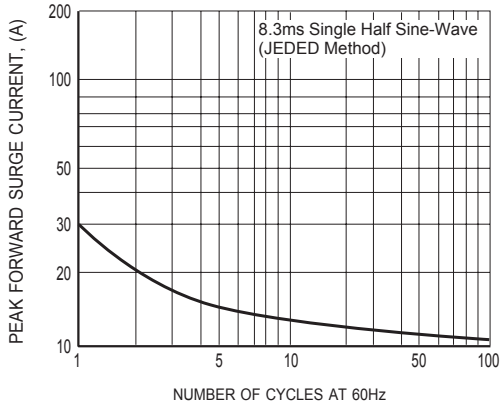


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

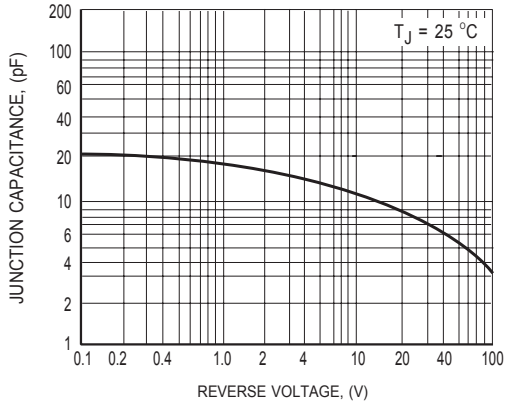
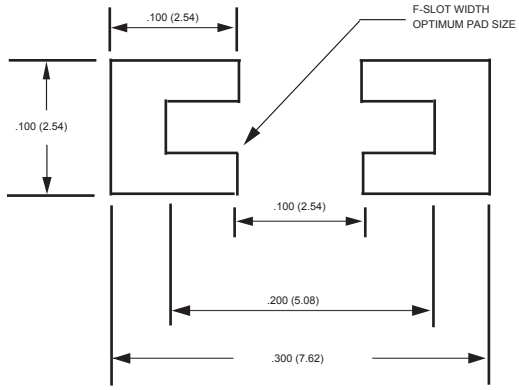


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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