

**SURFACE MOUNT GLASS PASSIVATED
 SUPER FAST SILICON RECTIFIER**

VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

FEATURES

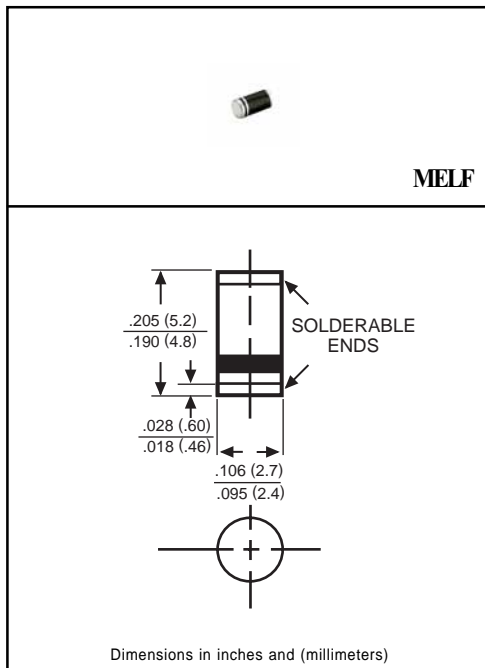
- * Fast switching
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.015 gram

MECHANICAL DATA

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

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 (At TA = 25°C unless otherwise noted)

RATINGS		SYMBOL	ESM101	ESM102	ESM103	ESM104	ESM105	ESM106	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Volts		V _{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Current at TA = 55°C		I _O	1.0						Amps
Peak Forward Surge Current, I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	30						Amps
Typical Junction Capacitance (Note 2)		C _J	15			10			pF
Operating and Storage Temperature Range		T _J , T _{STG}	-65 to + 175						°C

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

CHARACTERISTICS		SYMBOL	ESM101	ESM102	ESM103	ESM104	ESM105	ESM106	UNITS
Maximum Forward Voltage at 1.0A DC		V _F	0.95			1.25			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	I _R	5.0						uAmps
	@ TA = 125°C		100						
Maximum Reverse Recovery Time (Note 1)		t _{rr}	35						nSec

NOTES : 1. Test Conditions: I_F=0.5A, I_R=-1.0A, I_{RR}=-0.25A.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (ESM101 THRU ESM106)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

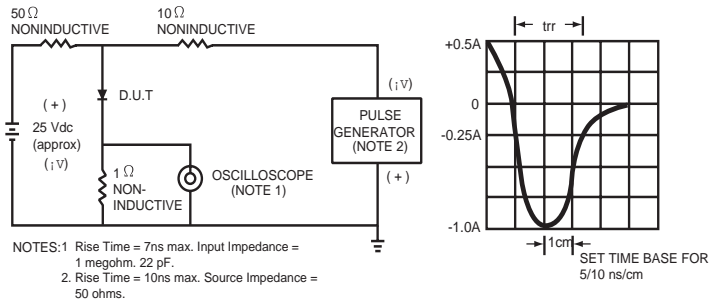


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

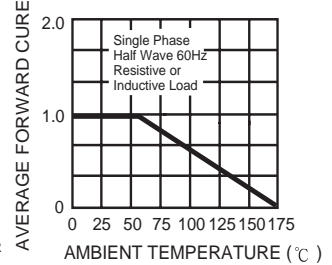


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

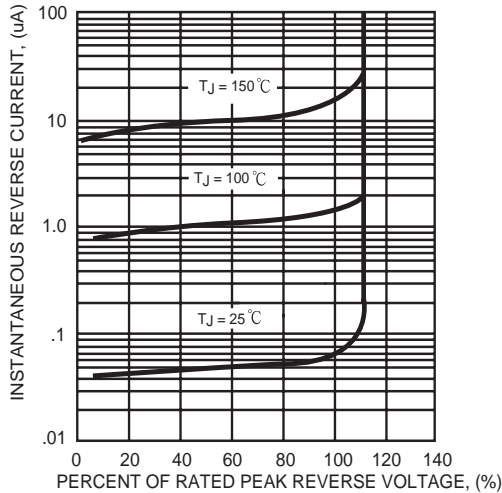


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

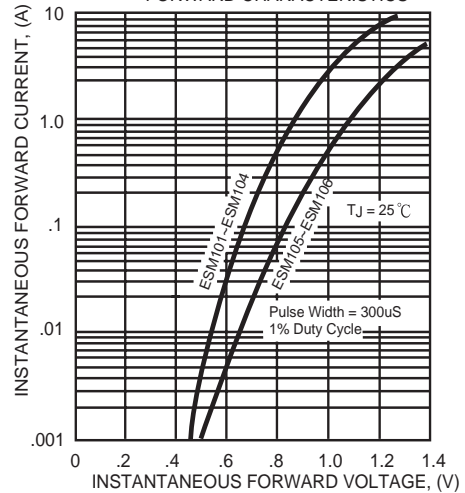


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

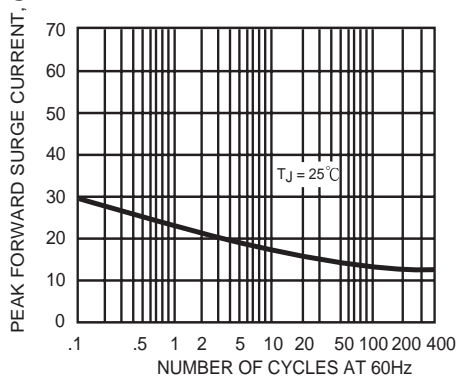


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

