

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER**
VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

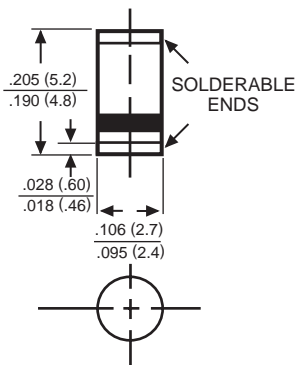
FEATURES

- * 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

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 (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 T _A = 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	@T _A = 25°C	I _R	5.0						uAmps
at Rated DC Blocking Voltage	@T _A =125°C		100						
Maximum Reverse Recovery Time (Note 1)		t _{rr}	35						nSec

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

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

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RATING AND CHARACTERISTIC CURVES (ESM101 THRU ESM106)

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

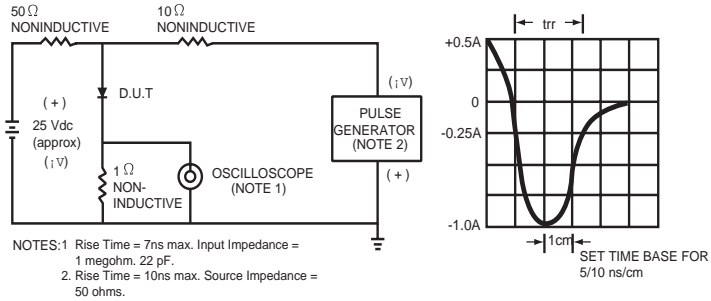


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

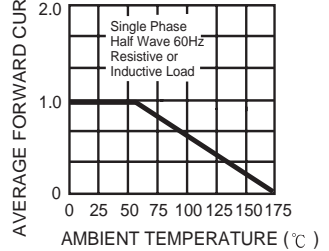


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

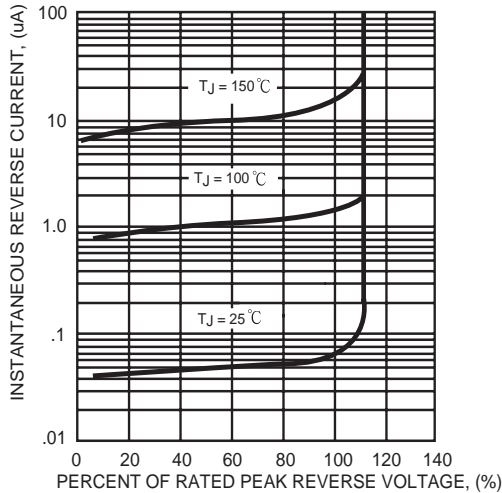


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

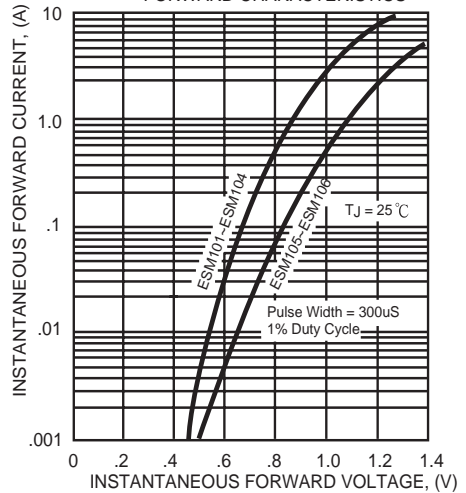


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

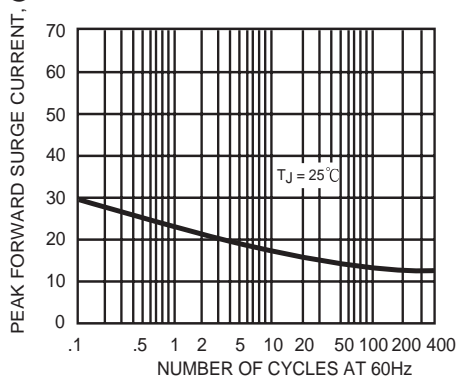


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

