

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER**
VOLTAGE RANGE 50 to 200 Volts CURRENT 0.5 Ampere

FEATURES

- * Glass passivated device
- * For surface mounted applications
- * Ultrafast recovery times dor high efficiency
- * Low forward voltage, low power loss
- * Low leakage current

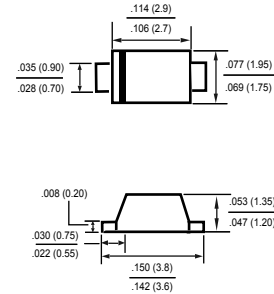
MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.016 gram

NEW RELEASE



SOD-123F



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)

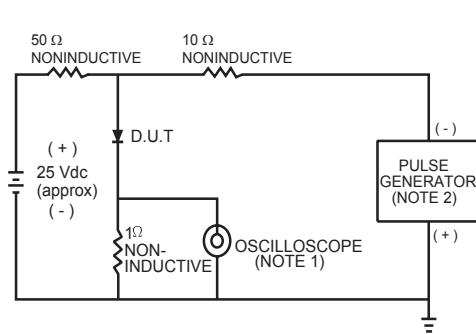
RATINGS	SYMBOL	05U1	05U2	05U3	05U4	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I _O	0.5				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	15				Amps
Typical Thermal Resistance (Note 1)	R _{θJA}	120				°C/W
Typical Thermal Resistance (Note 1)	R _{θJL}	20				°C/W
Typical Junction Capacitance (Note 2)	C _J	18				pF
Operating Temperature Range	T _J	150				°C
Storage Temperature Range	T _{STG}	-55 to + 150				°C

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

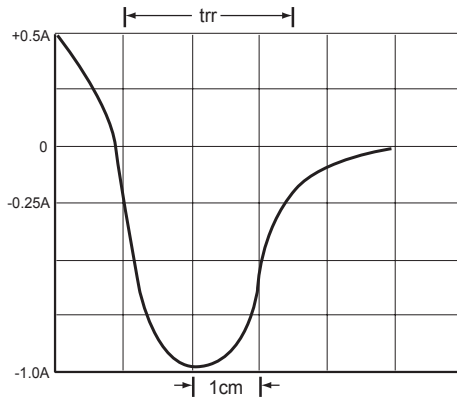
CHARACTERISTICS	SYMBOL	05U1	05U2	05U3	05U4	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	V _F	0.95				Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ T _A = 25°C	5				μA
	@ T _A = 100°C	350				μA
Maximum Reverse Recovery Time (Note 4)	t _{rr}	20				nSec

- NOTES : 1. Thermal Resistance :Mounted on PCB.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
 4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

RATING AND CHARACTERISTICS CURVES (05U1 THRU 05U4)



- NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
 2 Rise Time = 10ns max. Source Impedance = 50 ohms.



SET TIME BASE FOR 50/100 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

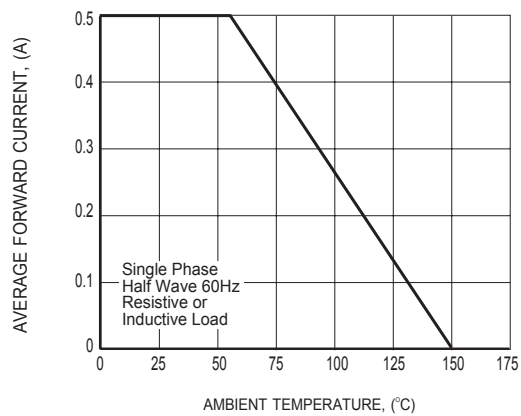


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

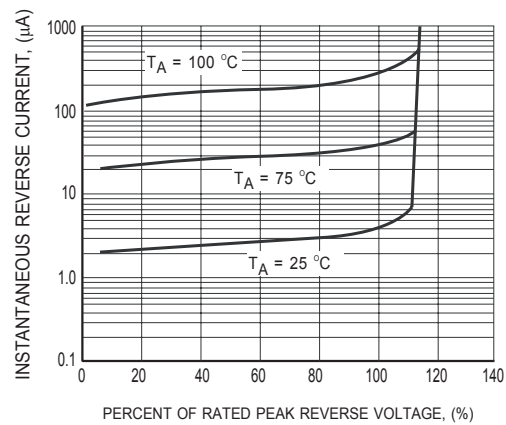


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (05U1 THRU 05U4)

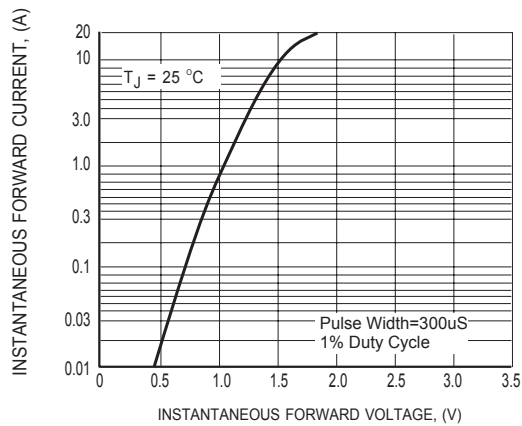


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

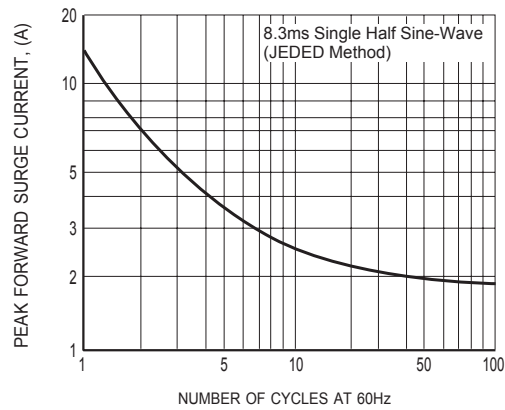


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

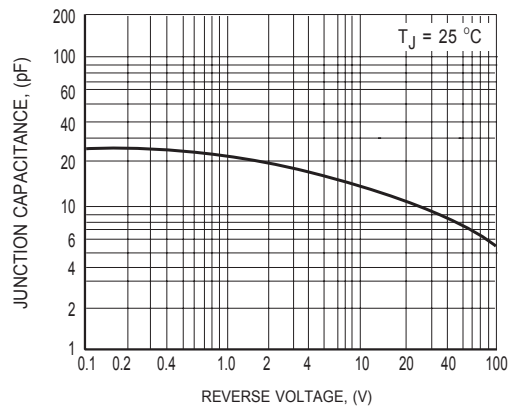
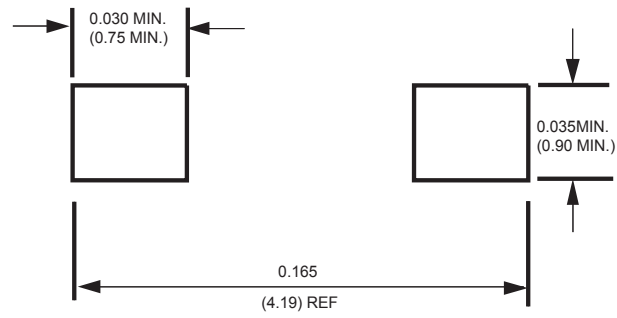


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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