

# 05E1 THRU 05E6

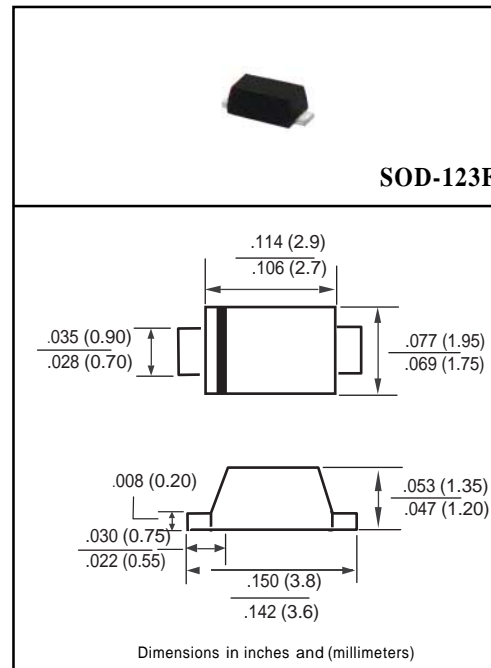


**FEATURES**

- \* High reliability
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* Super fast switching speed
- \* High surge capability
- \* Good for switching mode circuit

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.016 gram



**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	05E1	05E2	05E3	05E4	05E5	05E6	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	Volts
Maximum RMS Volts	V <sub>RMS</sub>	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V <sub>bc</sub>	50	100	150	200	300	400	Volts
Maximum Average Forward Current at TA = 55°C	I <sub>o</sub>	0.5						Amps
Peak Forward Surge Current I <sub>FM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	15						Amps
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	12				14		pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150						°C

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

CHARACTERISTICS	SYMBOL	05E1	05E2	05E3	05E4	05E5	05E6	UNITS
Maximum Forward Voltage at 0.5A DC	V <sub>F</sub>	0.95				1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	5.0						uAmps
		100						
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	35						nSec

- NOTES : 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=-1.0A, I<sub>RR</sub>=-0.25A.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
 3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

# RATING AND CHARACTERISTIC CURVES ( 05E1 THRU 05E6 )

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

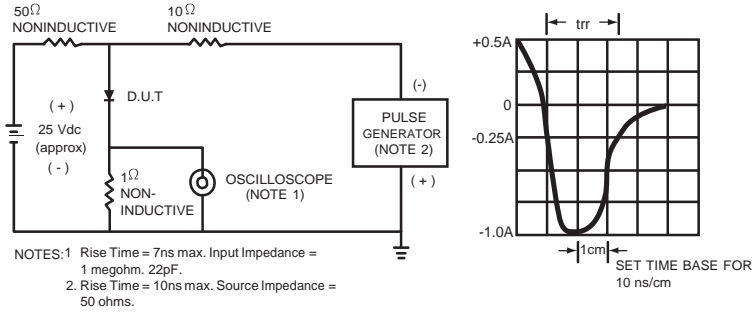


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

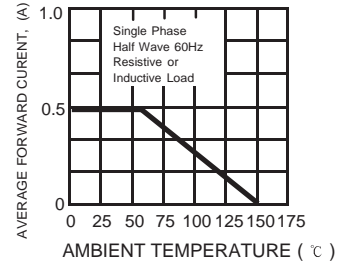


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

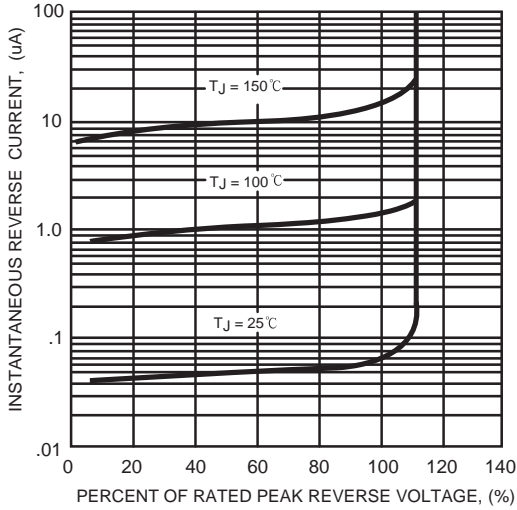


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

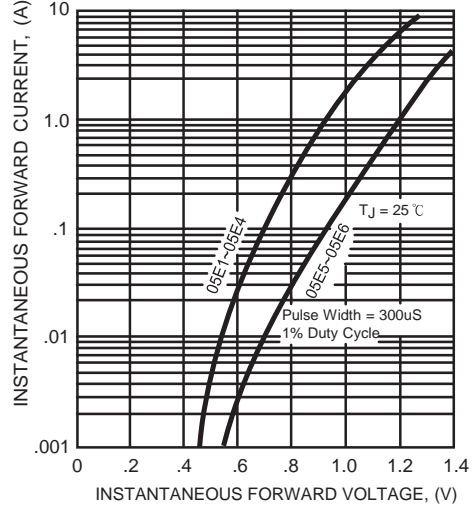


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

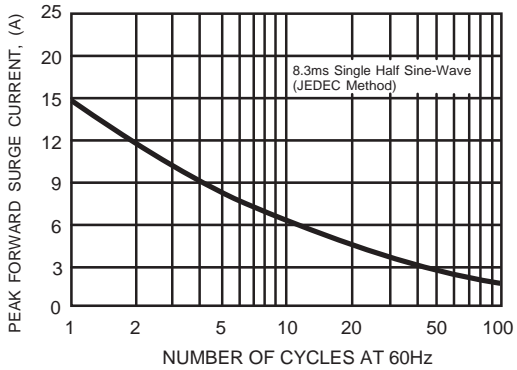


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

