

SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 1200 Volts CURRENT 0.5 Ampere

FEATURES

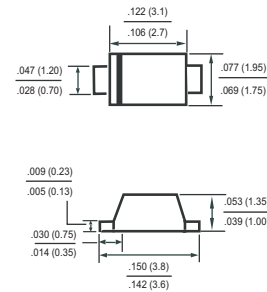
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O
- * Mounting position: Any
- * Weight: 0.018 gram



SOD-123F



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load.

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

RATINGS	SYMBOL	05H12	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	1200	Volts
Maximum RMS Voltage	V _{RMS}	840	Volts
Maximum DC Blocking Voltage	V _{DC}	1200	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 Current Square Time	I ² T	0.9	A ² S
Typical Thermal Resistance (Note 3)	R _{θJA}	130	°C/W
	R _{θJL}	30	
Typical Junction Capacitance (Note 2)	C _J	12	pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	°C

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

CHARACTERISTICS	SYMBOL	05H12	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	V _F	1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	I _R	5.0	uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C		100	uAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	75	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
 3. Thermal Resistance : Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (05H12)

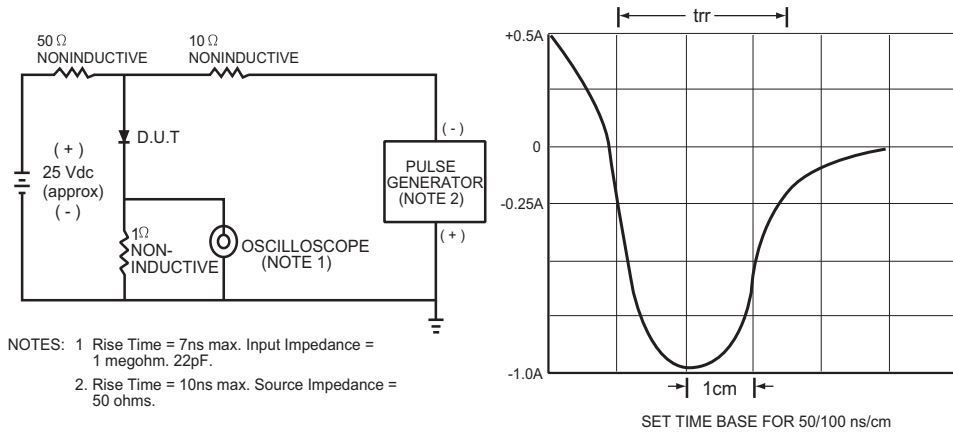


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

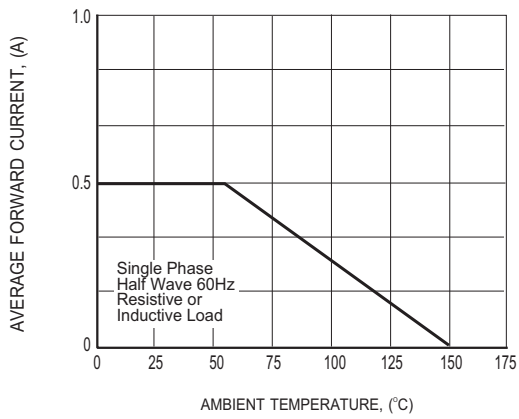


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

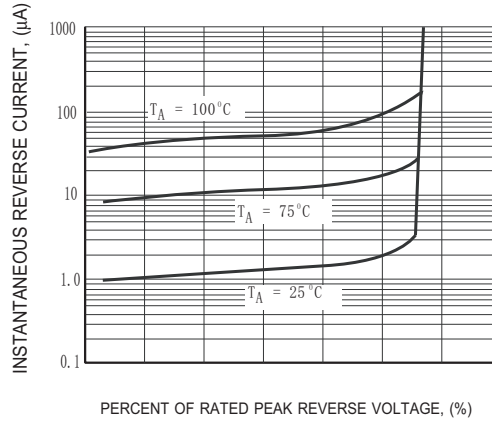


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (05H12)

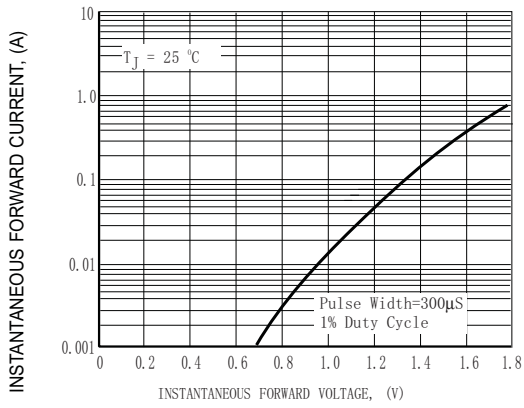


FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

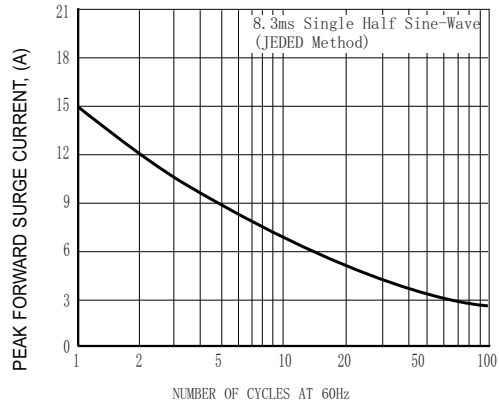


FIG. 5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

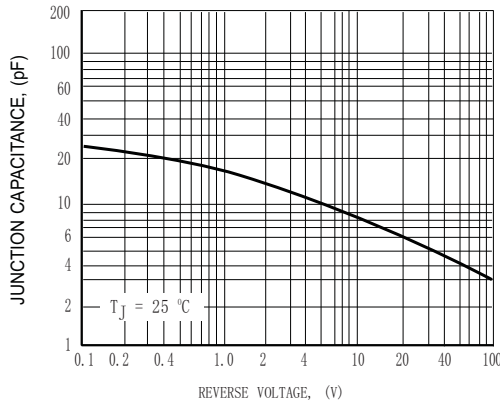
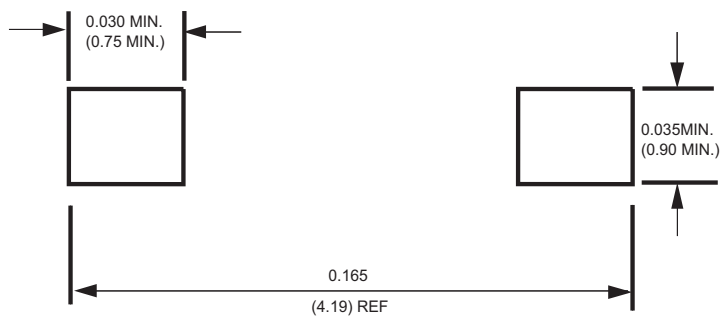


FIG. 6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout

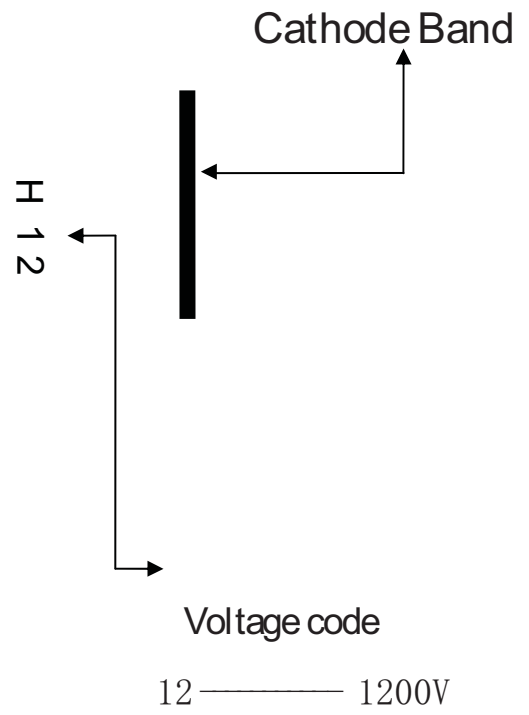


Dimensions in inches and (millimeters)

Marking Description

Year- code ← <
(Last digit of year)

Week-code: ← W
WW,01~52



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F/ SOD-123FL	-W	3,000	15,000	---	---	178	390*205*31	120,000	6.964

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