

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 0.5 Ampere

FEATURES

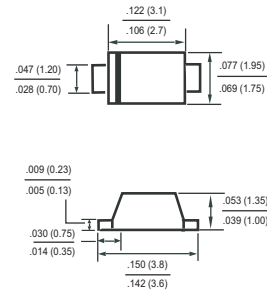
- * Fast switching
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High current surge
- * High reliability

MECHANICAL DATA

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



SOD-123F



Dimensions in inches and (millimeters)

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	05F1	05F2	05F3	05F4	05F5	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	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
Current Squared Time	I ² t	0.93					A ² Sec
Typical Thermal Resistance (Note 4)	R _{θJA}	32					°C/W
	R _{θJL}	150					
Typical Junction Capacitance (Note 2)	C _J	15					pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150					°C

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

CHARACTERISTICS	SYMBOL	05F1	05F2	05F3	05F4	05F5	UNITS
Maximum Instantaneous Forward Voltage at 0.5ADC	V _F	1.3					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T _A = 25°C	I _R	5.0					uAmps
Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at T _L = 55°C		100					uAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	150				250	nSec

- NOTES : 1. Reverse Recovery 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. " ROHS compliant"
 4. Thermal Resistance : Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (05F1 THRU 05F5)

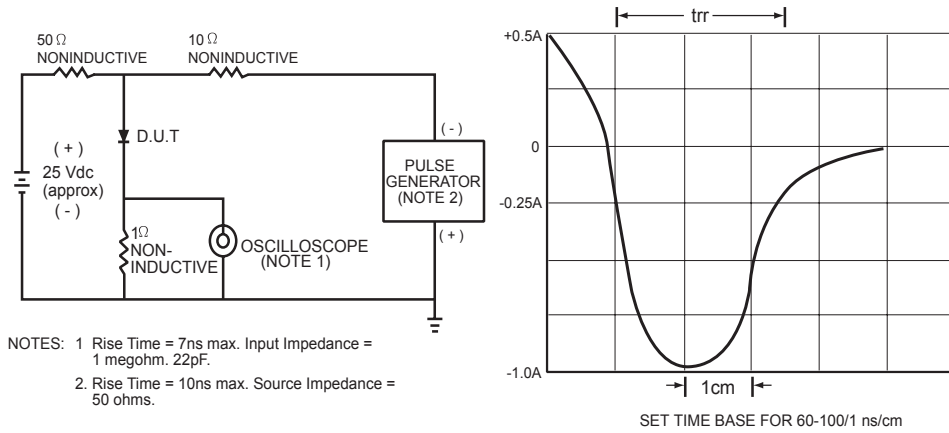


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

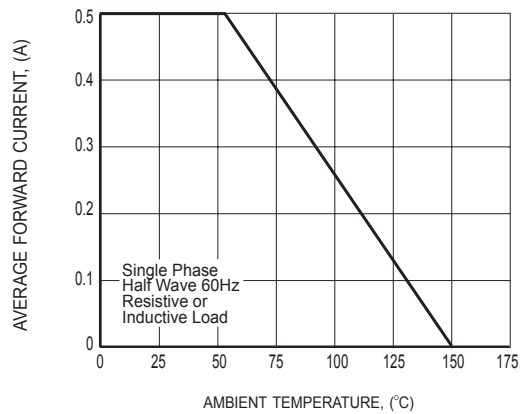
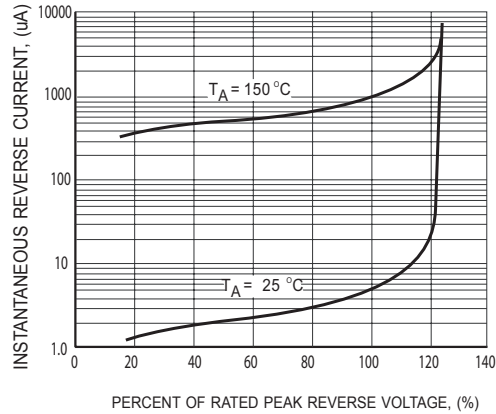


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE



CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (05F1 THRU 05F5)

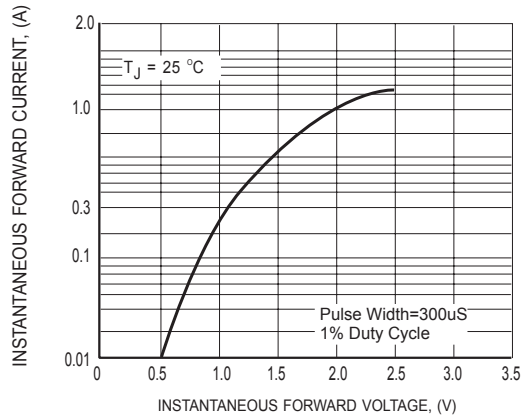


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

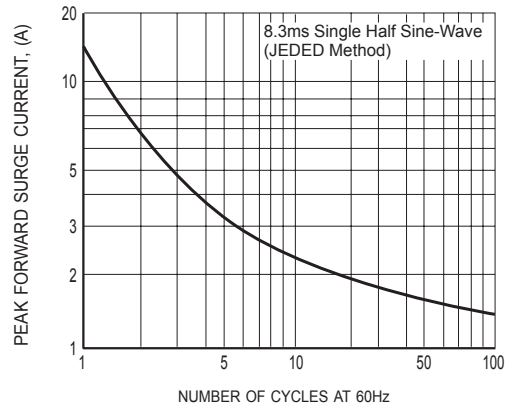


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

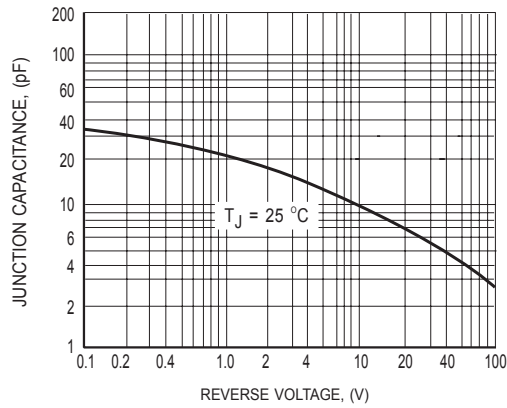
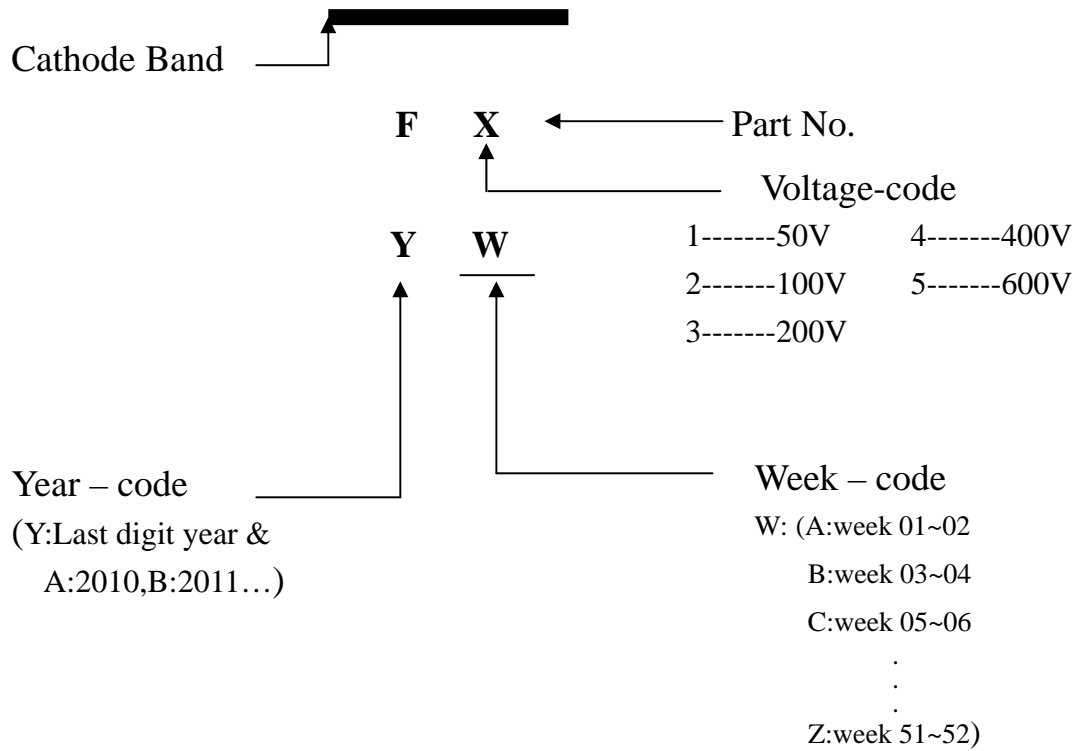


FIG.6 TYPICAL JUNCTION CAPACITANCE

Marking Description



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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