

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 60 Volts CURRENT 0.5 Ampere**

**FEATURES**

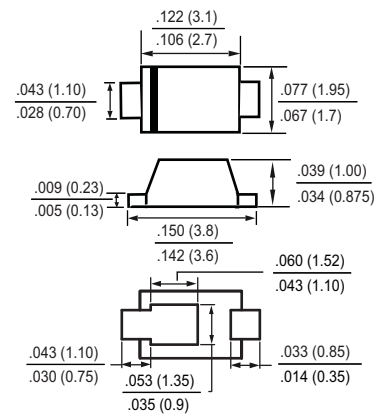
- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0
- \* Mounting position: Any
- \* Weight: 0.015 gram



**SOD-123FL**



**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	05S2L	05S3L	05S4L	05S5L	05S6L	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	Volts	
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	Volts	
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at TA=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	$I^2T$	0.9						A <sup>2</sup> S
Typical Junction Capacitance (Note 1)	$C_J$	110						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	110						°C/W
	$R_{\theta JL}$	30						°C/W
Operating Temperature Range	$T_J$	-55 to + 150						°C
Storage Temperature Range	$T_{STG}$	-55 to + 150						°C

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

CHARACTERISTICS	SYMBOL	05S2L	05S3L	05S4L	05S5L	05S6L	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	$V_F$	0.55			0.75		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ TA = 25°C			0.2		mAmps
		@ TA = 150°C			15		mAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "ROHS compliant".  
3. Thermal Resistance: Mounted on PCB.

## RATING AND CHARACTERISTICS CURVES ( 05S2L THRU 05S6L )

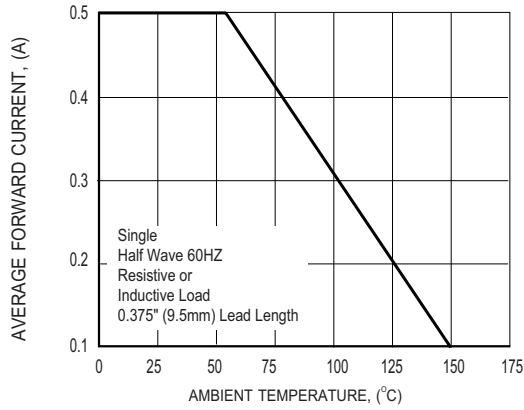


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

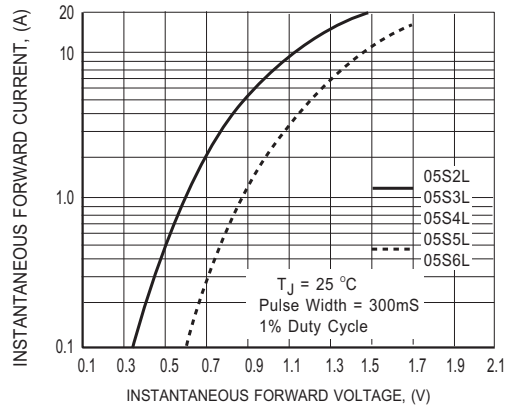


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

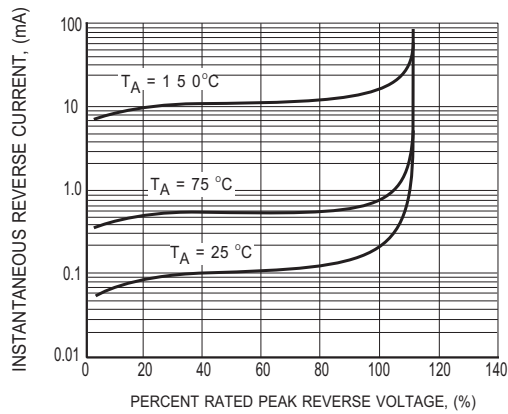


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

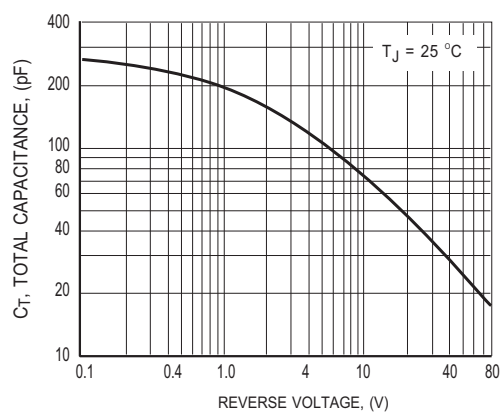


FIG.4 TYPICAL JUNCTION CAPACITANCE

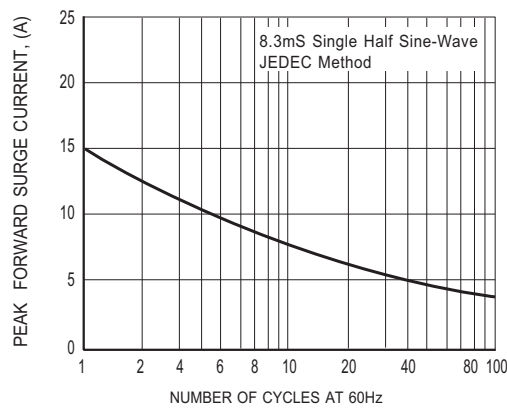
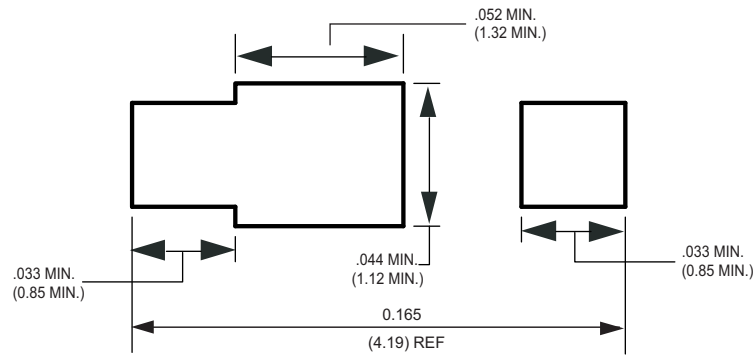


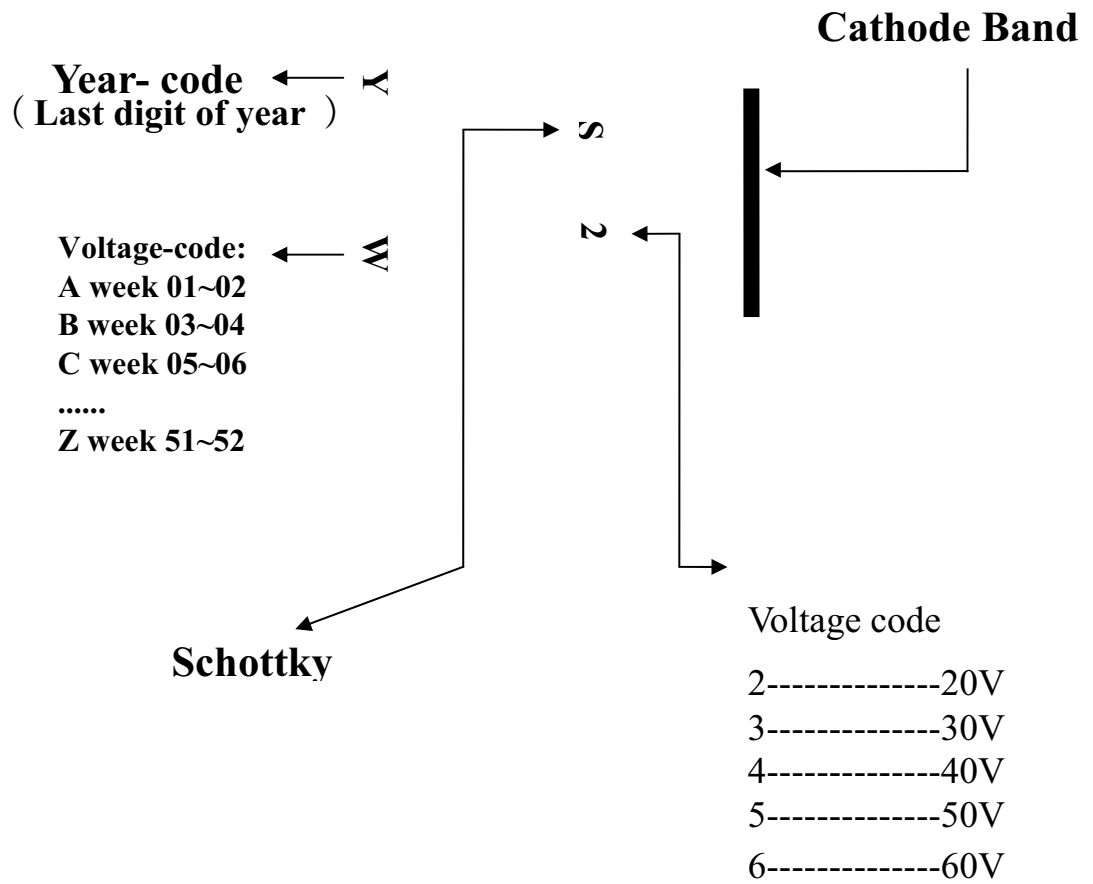
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

# 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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