

LOW Vf SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

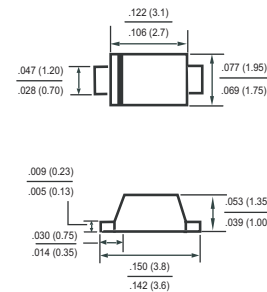
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-0
- * Mounting position: Any
- * Weight:0.018gram



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	SSL20	SSL30	SSL40	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage	V _{DC}	20	40	40	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T _A =75 °C	I _O		1.0		Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}		40		Amps
Typical Current Square Time	I ² T		2.5		A ² S
Typical Junction Capacitance (Note1)	C _J		110		pF
Typical Thermal Resistance (Note 3)	R _{θJA}		110		°C/W
	R _{θJL}		30		
Power Dissipation(Note 5)	P _D		1670		mW
Power Dissipation(Note 6)	P _D		556		mW
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	SSL20	SSL30	SSL40	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F		.36		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	I _R		1.0		mAmps
			80		mAmps
Maximum Reverse Recovery Time (Note 4)	T _{rr}		8		nSec

- NOTES :
1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 2. ROHS compliant.
 3. Thermal resistance: Mounted on PCB.
 4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.
 5. Part mounted on 2"x2" GETEK board with 1"x1" copper pad, 25% anode, 75% cathode.
 6. Part mounted on FR-4 board with recommended pad layout

RATING AND CHARACTERISTICS CURVES (SSL20 THRU SSL40)

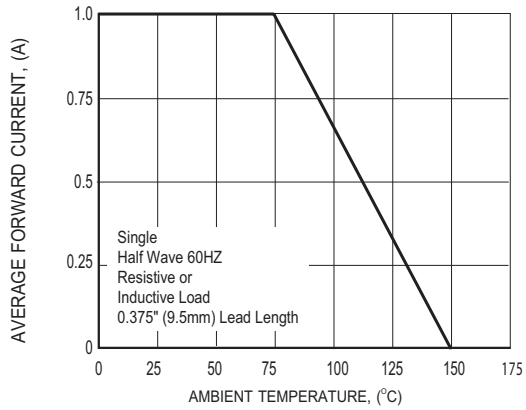


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

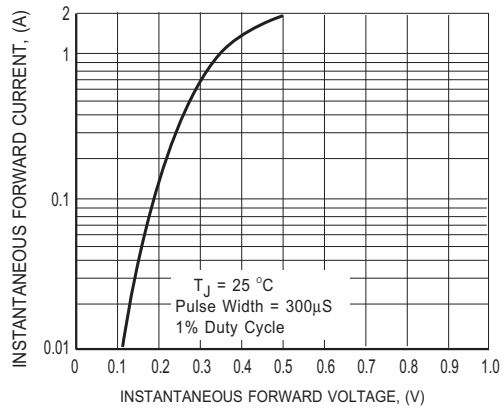


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

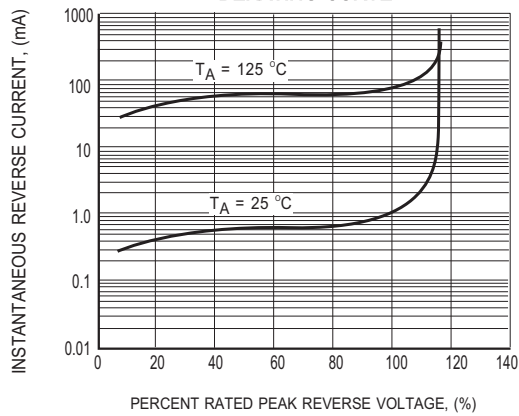


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

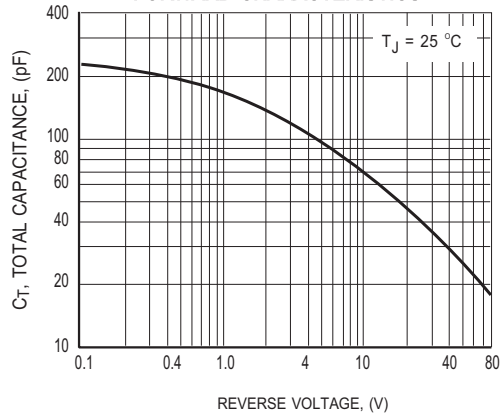


FIG.4 TYPICAL JUNCTION CAPACITANCE

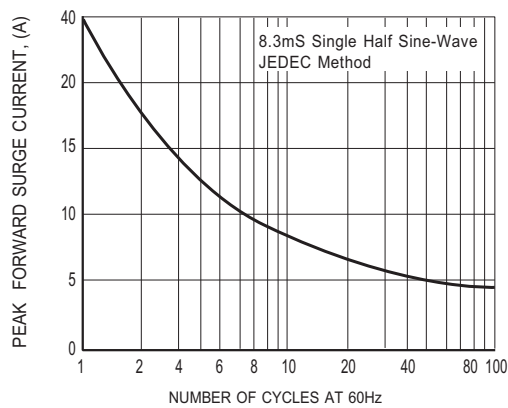
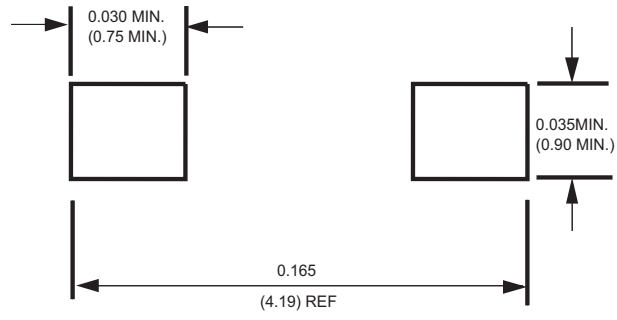


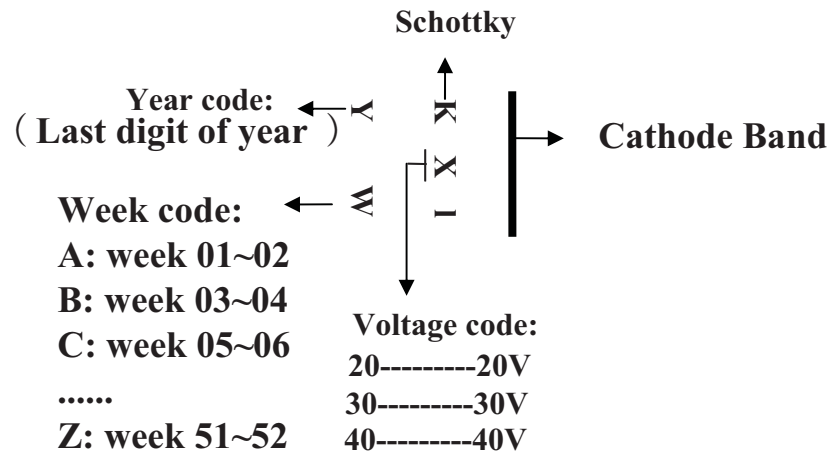
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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