RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

05SSL20 THRU 05SSL40

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 0.5 Ampere

NEW RELEASE

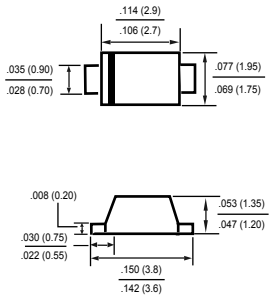
FEATURES

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

MECHANICAL DATA

* Epoxy: Device has UL flammability classification 94V-O
* Mounting position: Any
* Weight: 0.016 gram

SOD-123F



Dimensions in inches and (millimeters)

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 (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	05SSL20	05SSL30	05SSL40	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=100°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}	60			Amps
Typical Junction Capacitance (Note1)	C_J	110			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	110			°C/W
	$R_{\theta JL}$	30			
Operating Temperature Range	T_J	150			°C
Storage Temperature Range	T_{STG}	-55 to + 150			°C

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

CHARACTERISTICS		SYMBOL	05SSL20	05SSL30	05SSL40	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC		V_F	0.30			Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	1.0			mAmps
at Rated DC Blocking Voltage	@T_A = 100°C		10			mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
3. Thermal resistance: Mounted on PCB.

2006-11

RATING AND CHARACTERISTICS CURVES (05SSL20 THRU 05SSL40)

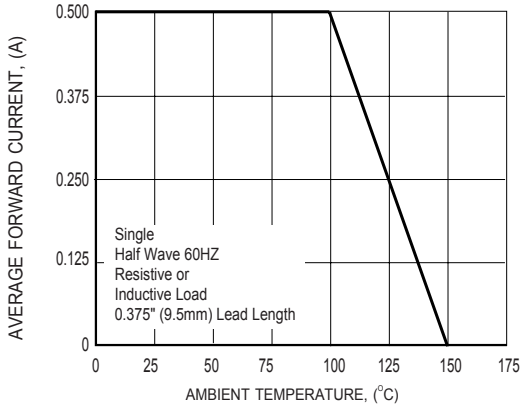


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

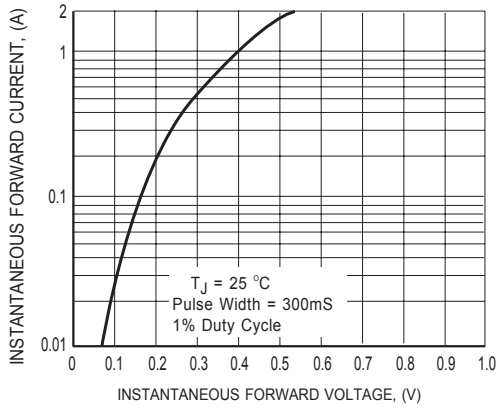


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

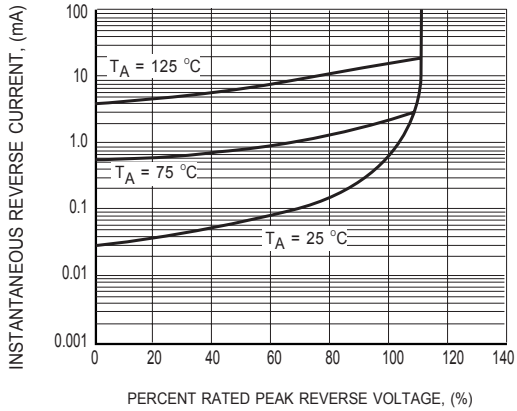


FIG.3 TYPICAL REVERSE CHARACTERISTICS

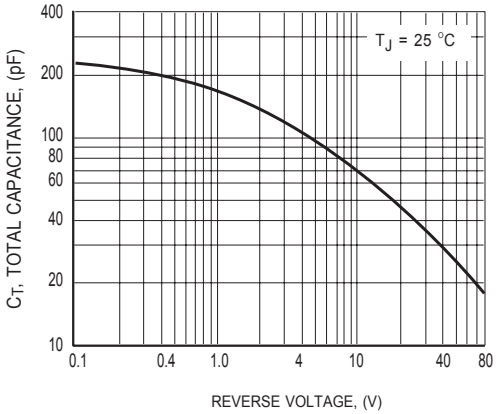


FIG.4 TYPICAL JUNCTION CAPACITANCE

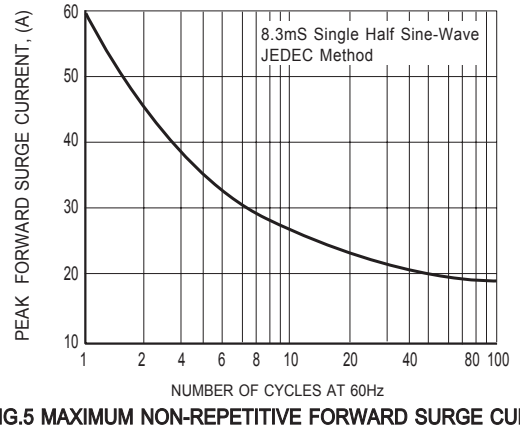
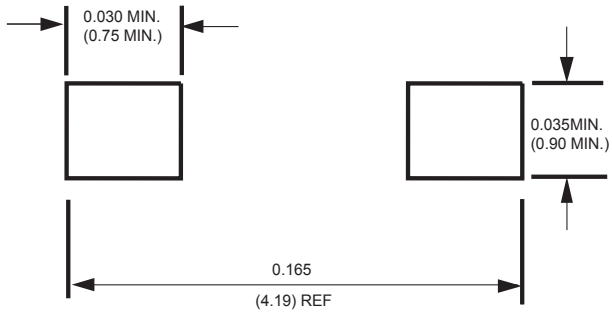


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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