RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

05S2L THRU 05S6L

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 60 Volts CURRENT 0.5 Ampere

NEW RELEASE

FEATURES

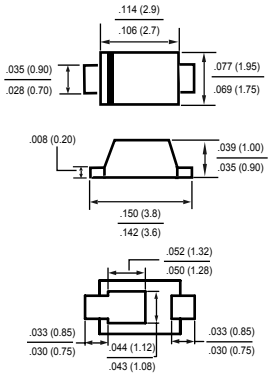
* Low power loss, high efficiency
* Low leakage
* Low forward voltage
* High current capability
* High speed switching
* High surge capabitity
* High reliability

MECHANICAL DATA

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



SOD-123FL



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	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 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 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	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	.55			.70		Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	0.2					mAmps
at Rated DC Blocking Voltage	@T_A = 100°C		2					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 (05S2L THRU 05S6L)

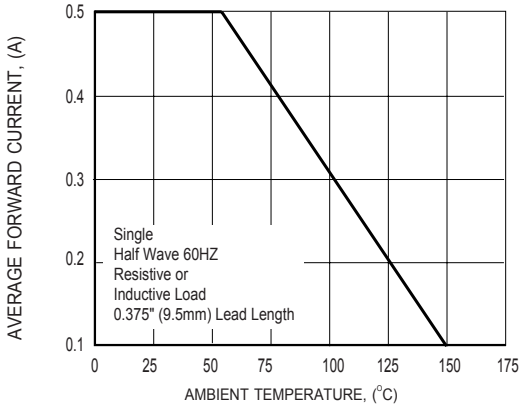


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

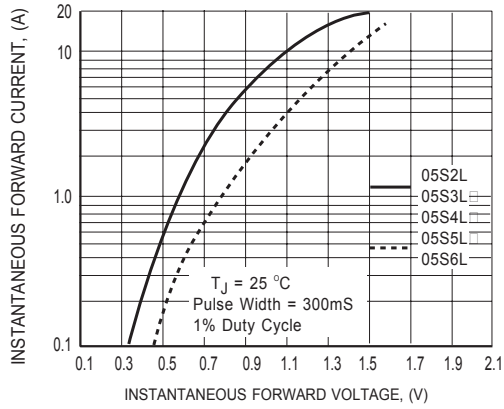


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

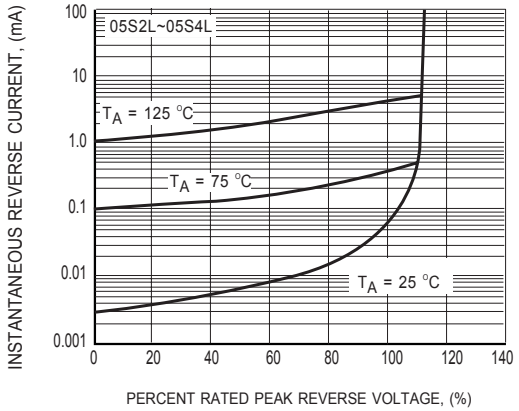


FIG.3 TYPICAL REVERSE CHARACTERISTICS

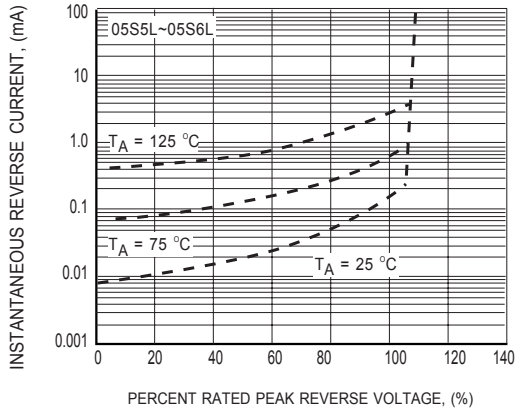


FIG.3 TYPICAL REVERSE CHARACTERISTICS

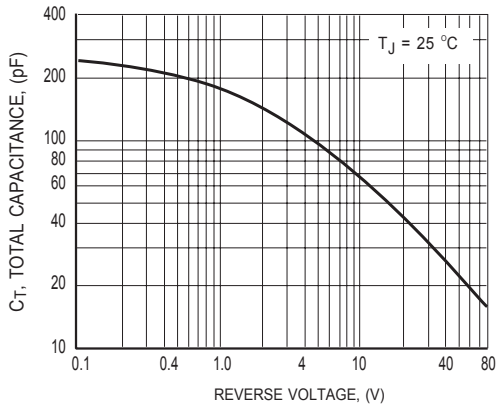


FIG.4 TYPICAL JUNCTION CAPACITANCE

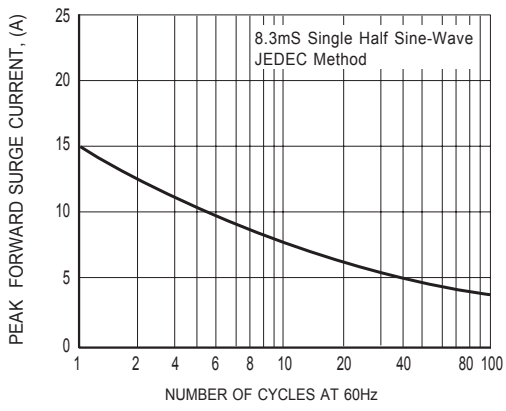
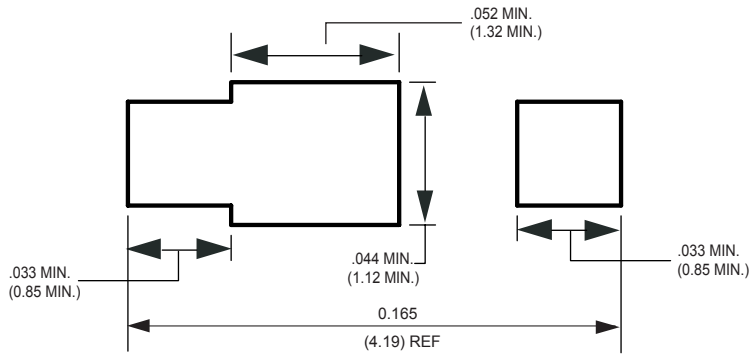


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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