RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

05A1 THRU 05A7

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.5 Ampere

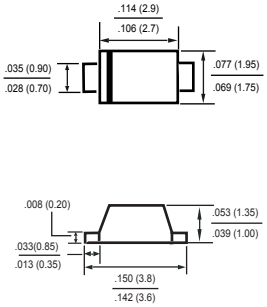
FEATURES

* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight:0.018gram

MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0

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	05A1	05A2	05A3	05A4	05A5	05A6	05A7	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 55°C	I_O	0.5							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	15							Amps
Current Squarad Time	I^2T	0.9							A^2/Sec
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	85							°C/W
	$R_{\theta JL}$	25					30		
Typical Junction Capacitance (Note 1)	C_J	8							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	05A1	05A2	05A3	05A4	05A5	05A6	05A7	UNITS
Maximum Forward Voltage at 0.5A DC		V_F	1.0							Volts
Maximum Full Load Reverse Current, Full cycle Average at T_A=55°C		I_R	30							uAmps
Maximum DC Average Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C		1.0							uAmps
	@T_A =150 °C		2.0							mAmps

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2."ROHS compliant".
3. Thernal Resistance: Mounted on PCB.

2020-04
REV:C

RATING AND CHARACTERISTICS CURVES (05A1 THRU 05A7)

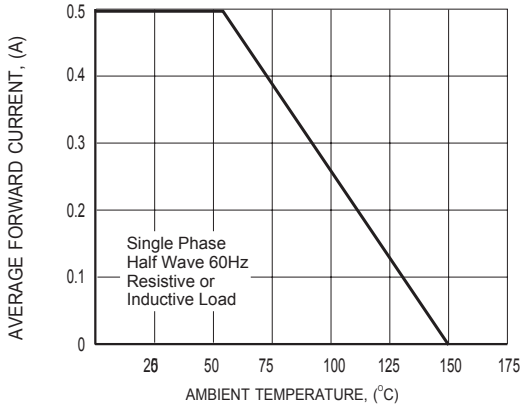


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

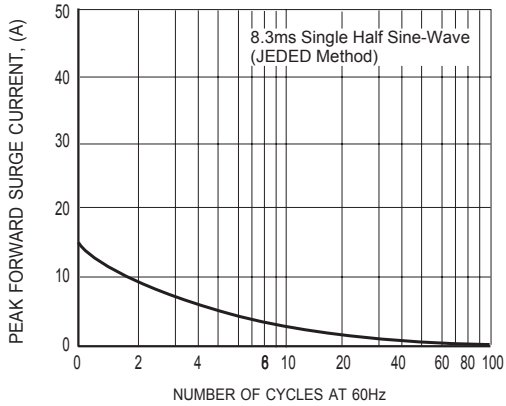
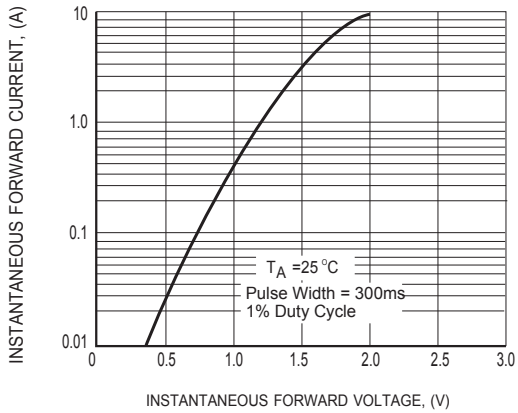
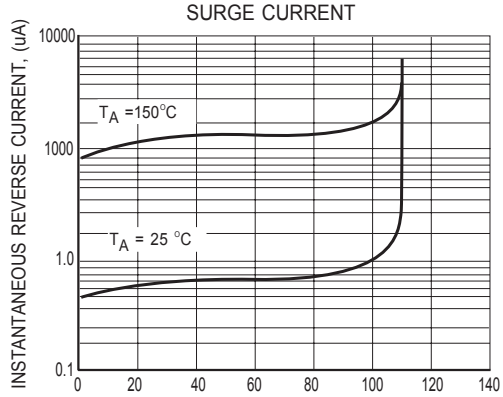


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FORWARD CHARACTERISTICS



CHARACTERISTICS

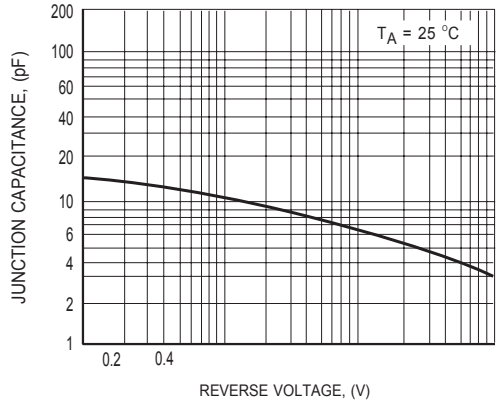
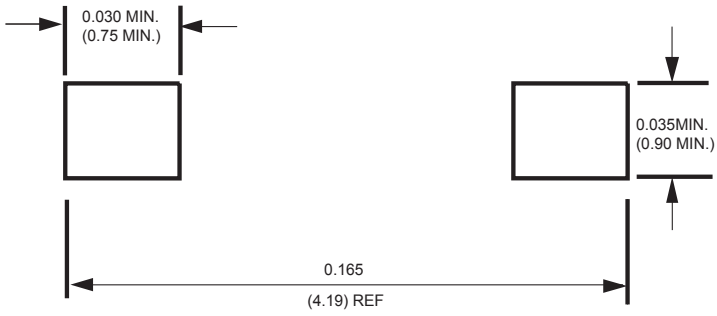


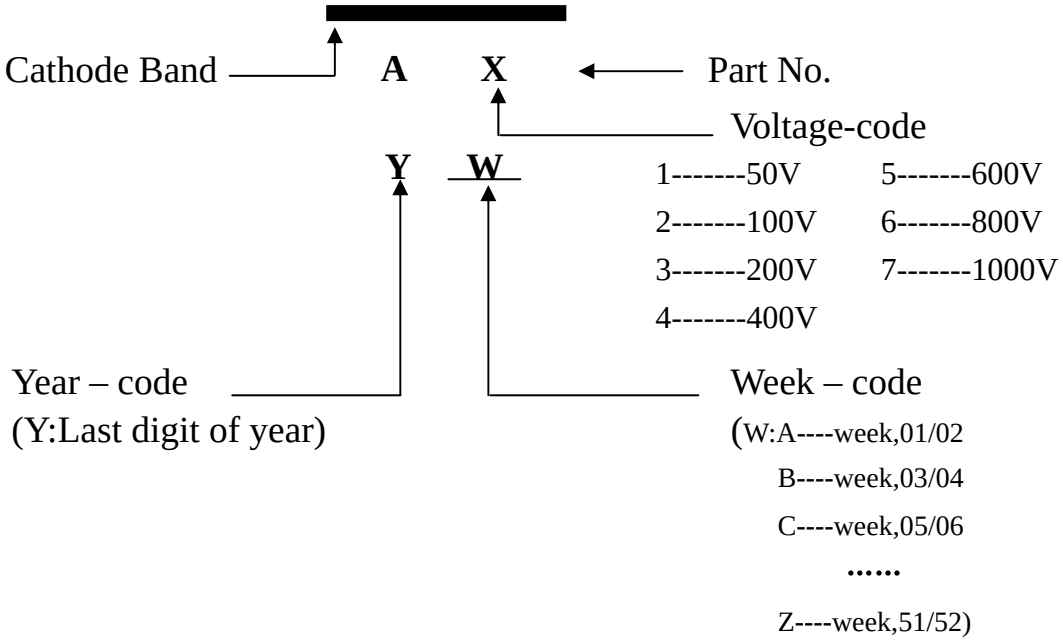
FIG.5 TYPICAL JUNCTION CAPACITANCE

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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