

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER
VOLTAGE RANGE 50 to 600 Volts CURRENT 5.0 Ampere**

FEATURES

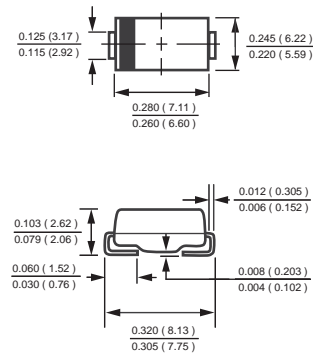
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

MECHANICAL DATA

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



DO-214AB



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	ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I _O	5.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150							Amps
Typical Current Square Time	I ² T	93.4							A ² S
Typical Thermal Resistance (Note 4)	R _{θJA}	20							°C/W
	R _{θJL}	5							
Typical Junction Capacitance (Note 2)	C _J	50							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55to+175							°C

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

CHARACTERISTICS	SYMBOL	ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	UNITS	
Maximum Instantaneous Forward Voltage at 5.0A DC	V _F	0.95				1.25		1.70		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@T _A = 25°C				3.0				μAmps
		@T _A = 150°C				2.0				mAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	35								nSec

- NOTES : 1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts
 3. Thermal Resistance : Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (ES5A THRU ES5J)

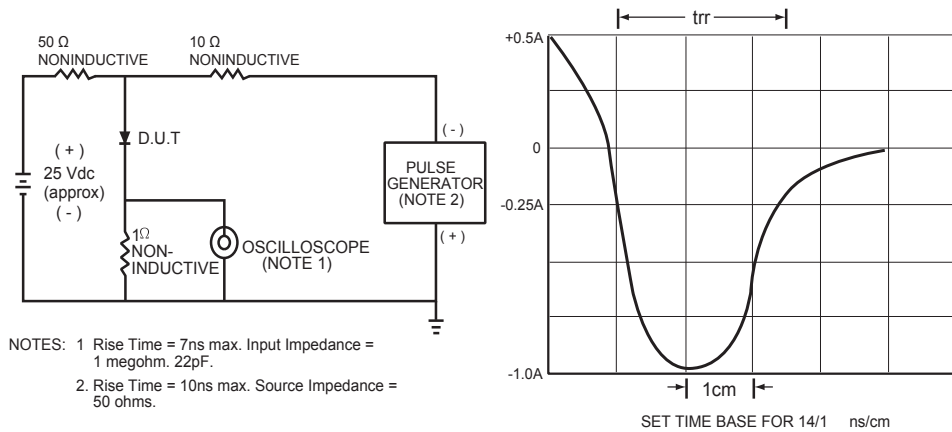


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

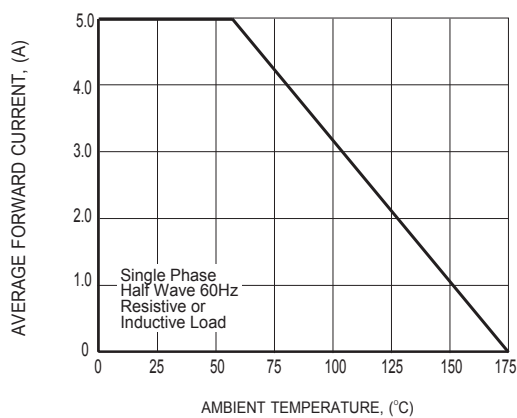


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

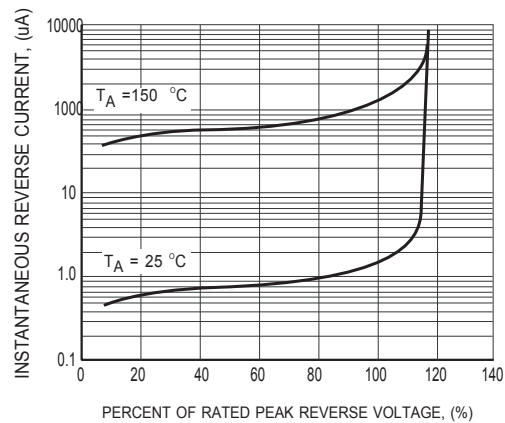


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (ES5A THRU ES5J)

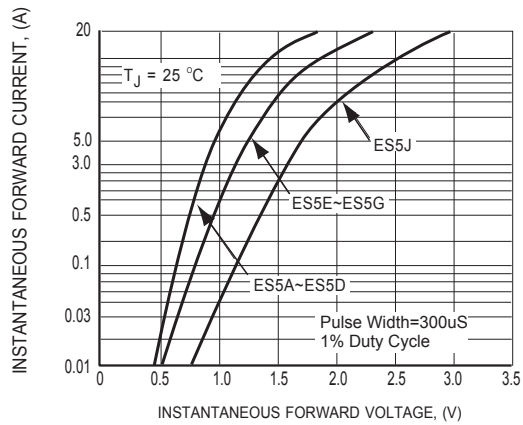


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

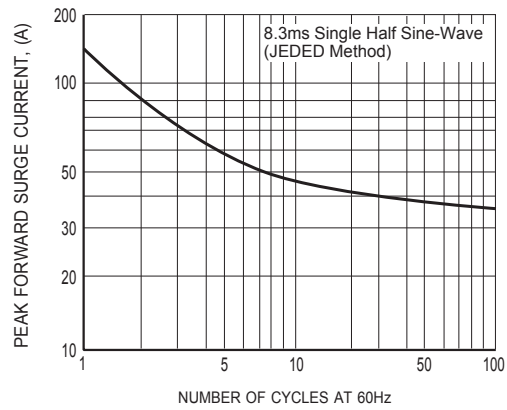


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

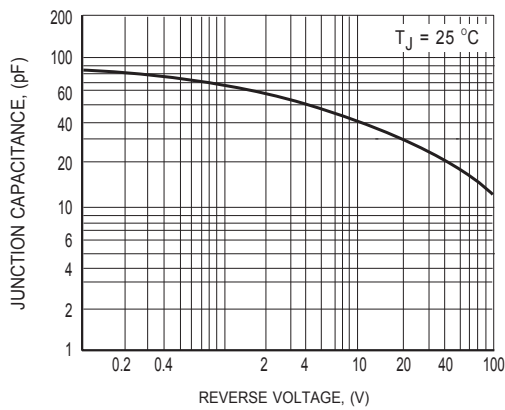
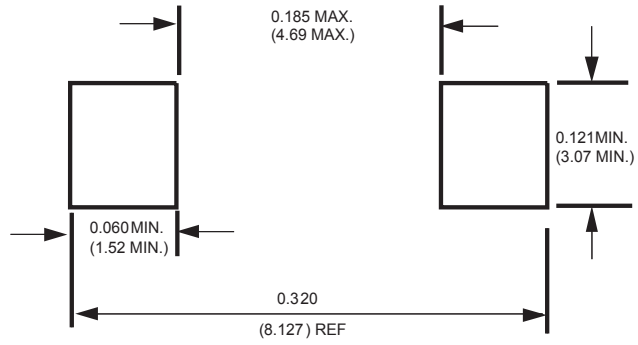


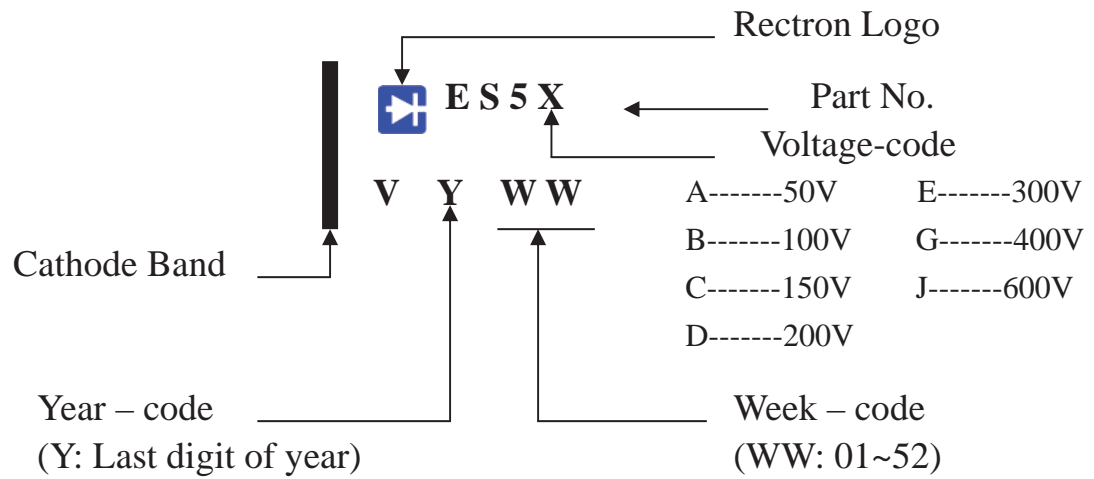
FIG.6 TYPICAL JUNCTION CAPACITANCE

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)
SMC	-W/-T	3,000	3,000	---	---	330	360*355*360	24,000	11.50

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