

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER**
VOLTAGE RANGE 50 to 600 Volts CURRENT 2.0 Amperes

**ES2A
THRU
ES2J**

FEATURES

- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Halogen-free

MECHANICAL DATA

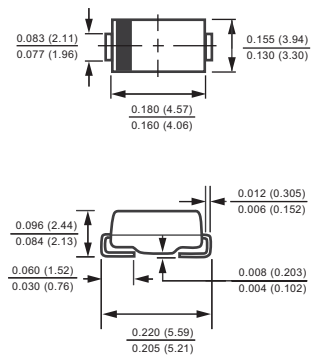
- * Epoxy : Device has UL flammability classification 94V-0
- * Mounting position: Any
- * Weight: 0.098 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load.



DO-214AA



MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	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	2.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	75							Amps
Typical Current Square Time	I ² T	23.3							A ² S
Typical Thermal Resistance (Note 4)	R _{θJA}	75							°C/W
	R _{θJL}	20				25			
Typical Junction Capacitance (Note 2)	C _J	30				20			pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC		V _F	0.95				1.25		1.70	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _A = 25°C	I _R	0.5							uAmps
	@T _A = 150°C		2.0							mAmps
Maximum Reverse Recovery Time (Note 1)		trr					35			nSec

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

2020-11
REV:F

RATING AND CHARACTERISTICS CURVES (ES2A THRU ES2J)

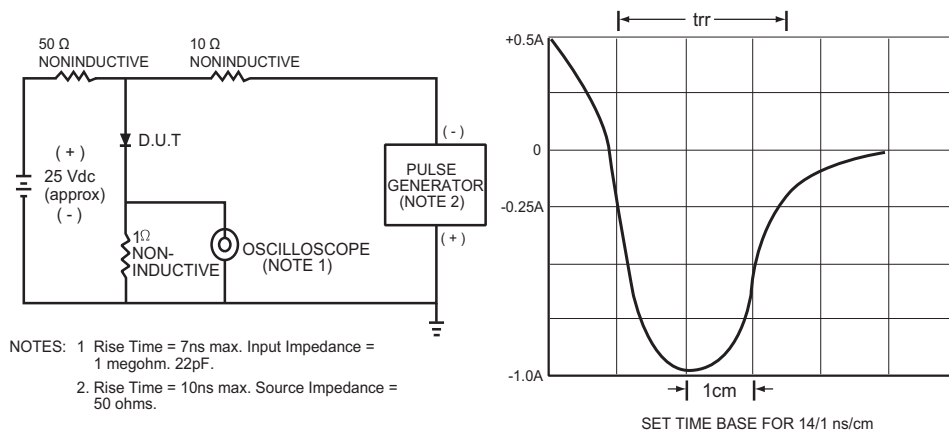


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

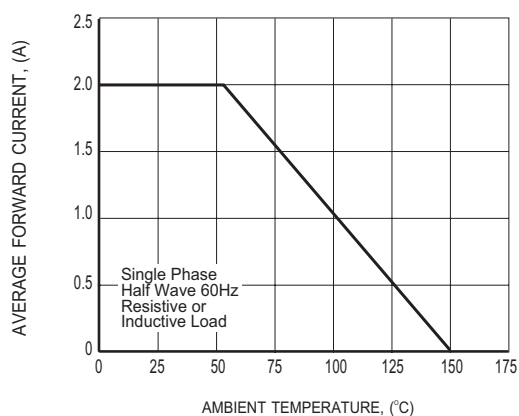


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

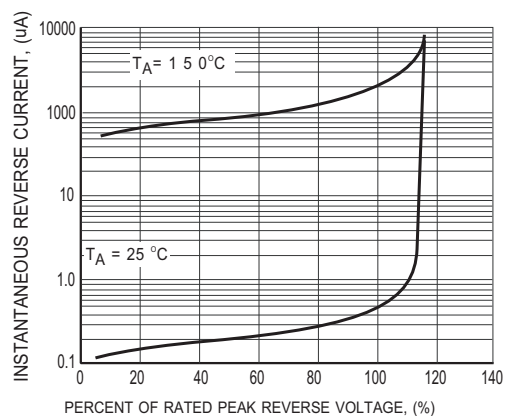


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (ES2A THRU ES2J)

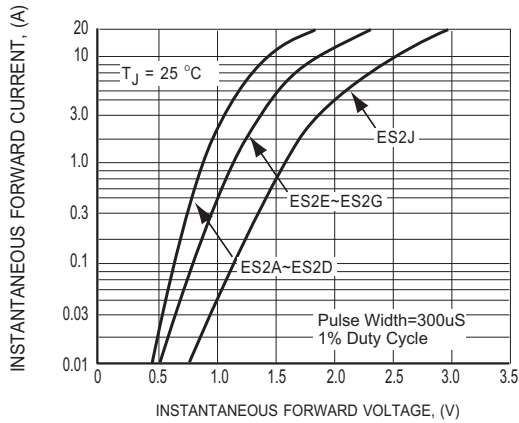


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

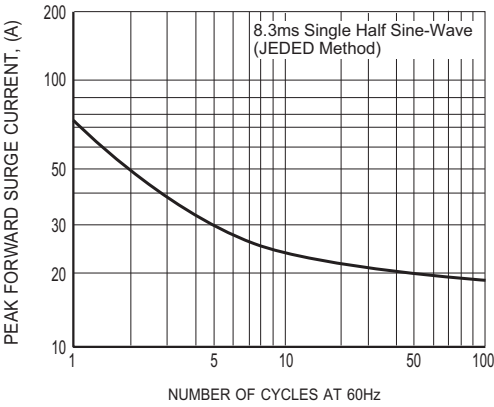


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

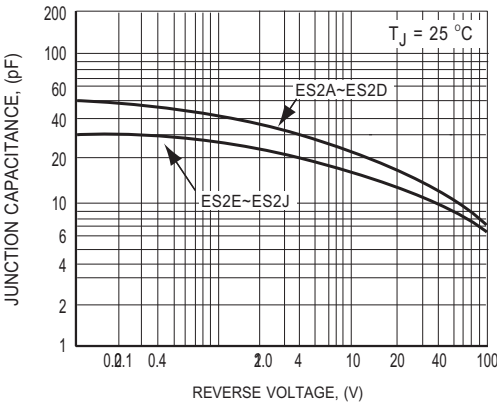
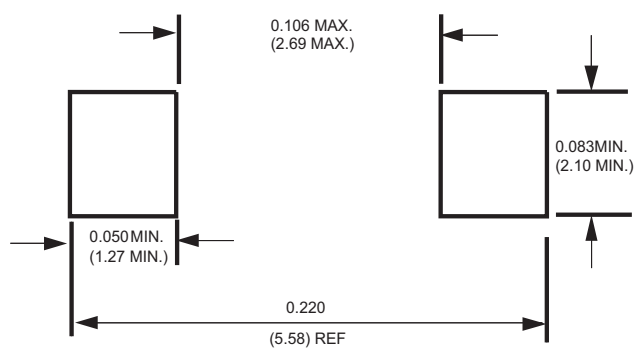


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

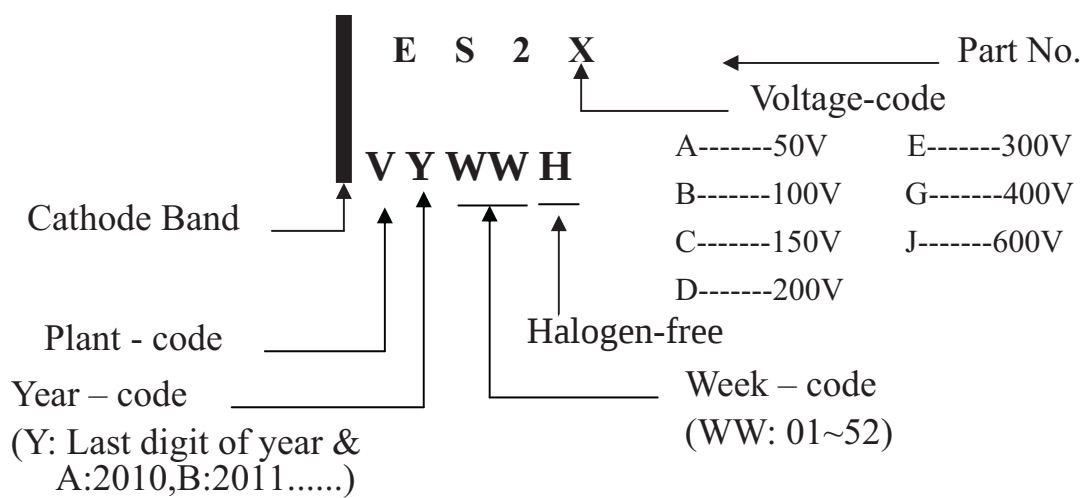


Attachment information about ES2X

1. Internal Circuit



2. Marking on the body





Attachment information about ES2X

3. Items marked on the reel box and carton

3.1 On the reel (for -T & -W)

CUSTOMER

TYPE

QUANTITY

LOT NO.

Q.A.

REMARK

3.2 On the box (for -T & -W)

TYPE

QUANTITY

LOT NO.

Q.A.

3.3 On the carton

CUSTOMER

TYPE

QUANTITY

LOT NO.

REMARK

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)
SMB	-W/-T	3,000	6,000	---	---	330	360*355*360	48,000	13.90