



ES3A THRU ES3J

PINGWEI ENTERPRISE

3.0AMPS. SUPER FAST SURFACE MOUNT RECTIFIER

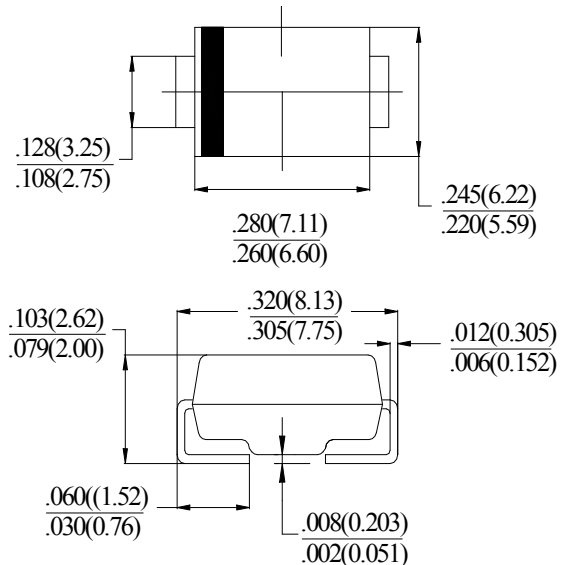
FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.
- . Superfast recovery time for high efficiency.
- . For surface mounted application.
- . Easy pick and place.

MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity:Color band denotes cathode end
- . Packaging:12mm tape per EIA STD RS-481
- . Mounting position: Any

SMC (DO-214AB)



MAXIMUM RATINGS AND ELETRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz,resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	SYM BOL	ES3A	ES3B	ES3D	ES3G	ES3J	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3.0					A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load (JEDEC method)	I_{FSM}	90.0					A
Maximum Forward Voltage at 3.0A DC	V_F	0.95		1.3		1.7	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 100.0					μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35					nS
Typical Junction Capacitance (Note 2)	C_J	45		30			pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	50					$^\circ\text{C}/\text{W}$
Storage Temperature	T_{STG}	-55 to +150					$^\circ\text{C}$
Operation Junction Temperature	T_J	-55 to +150					$^\circ\text{C}$

Note:

1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with 0.2×0.2”(5.0×5.0mm)Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (ES3A THRU ES3J)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

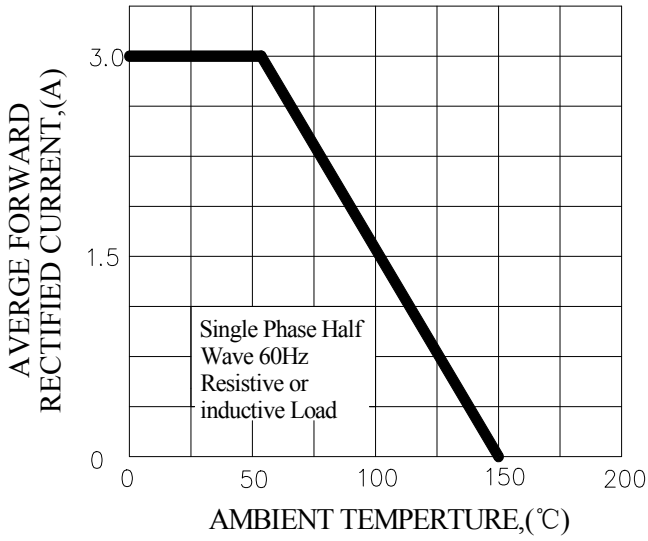


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

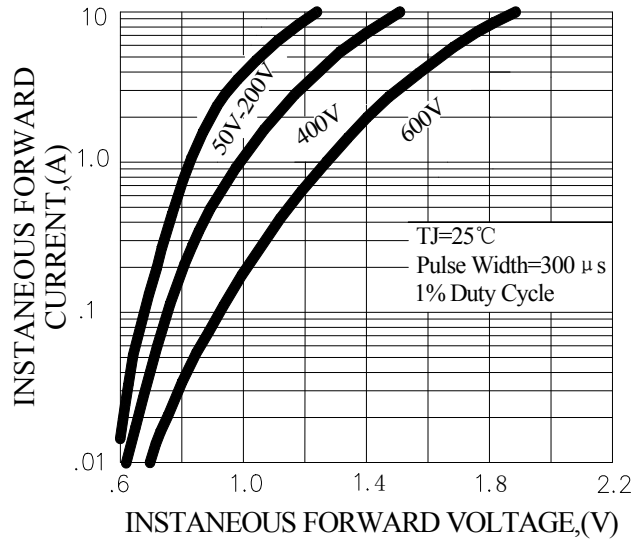


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

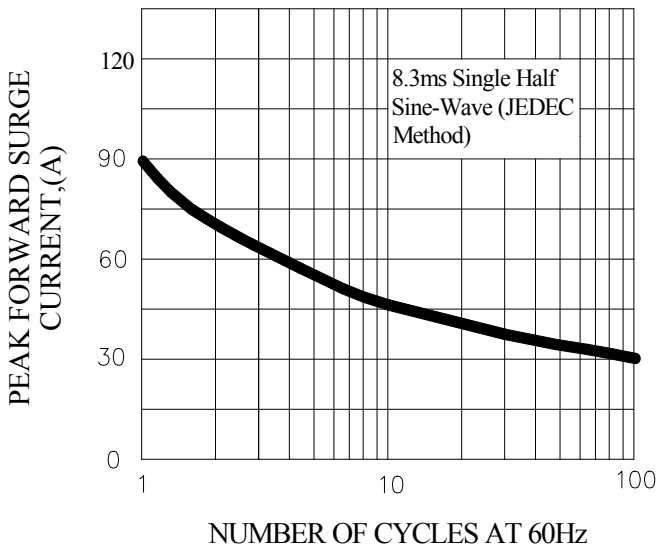


FIG.4-TYPICAL REVERSE CHARACTERISTICS

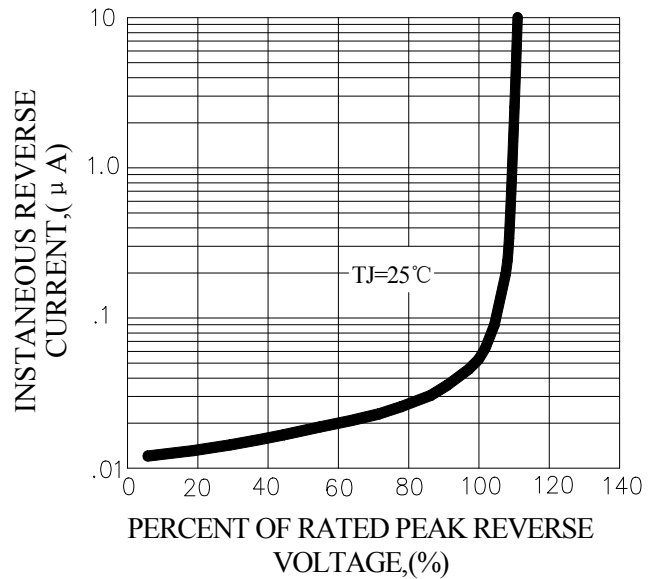
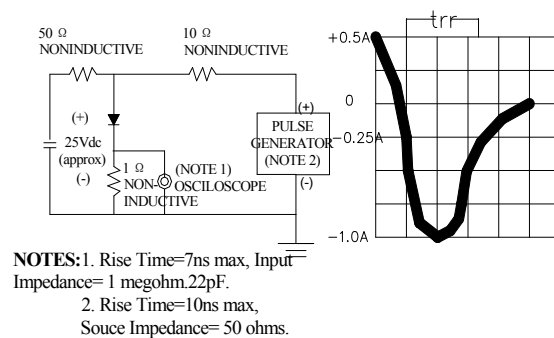


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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