



PINGWEI ENTERPRISE

US1A THRU US1M

1.0AMP. SURFACE MOUNT ULTRA FAST RECTIFIER

FEATURE

- . Low leakage
- . Low forward voltage drop
- . High current capability
- . High surge capability
- . High reliability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.
- . For surface mounted application.
- . Easy pick and place.

MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

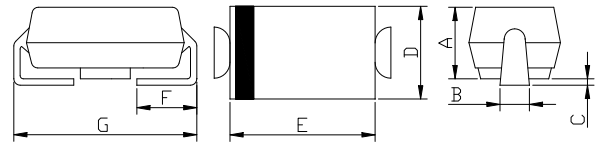


Fig1: SMA/DO-214AC*
FOR OPEN JUNCTION DICE PACKAGING OUTLINE

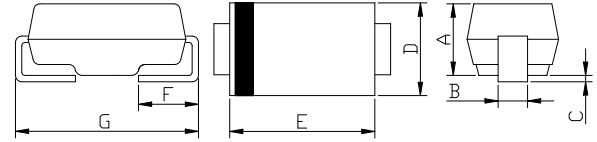


Fig2: SMA/DO-214AC
FOR GLASS PASSIVATED DICE PACKAGING OUTLINE

NO	Fig1 (mm)	Fig2 (mm)
A	1.9~2.4	1.98~2.3
B	1.2~1.8	1.35~1.6
C	0.23MAX	0.2MAX
D	2.4~2.9	2.4~2.9
E	3.8~4.6	3.8~4.6
F	0.8~1.8	0.8~1.8
G	4.8~5.8	4.8~5.8

MAXIMUM RATINGS AND ELECTRICAL 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	US 1A	US 1B	US 1D	US 1G	US 1J	US 1K	US 1M	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous forward Voltage at 1.0A DC	V_F	1.0		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}	50				75			nS
Typical Junction Capacitance (Note 2)	C_J	20				15			pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	75							$^\circ\text{C/W}$
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 (US1A THRU US1M)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

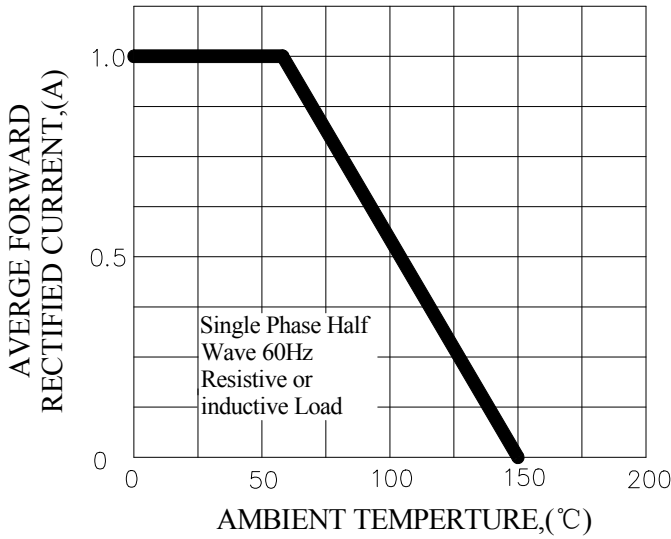


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

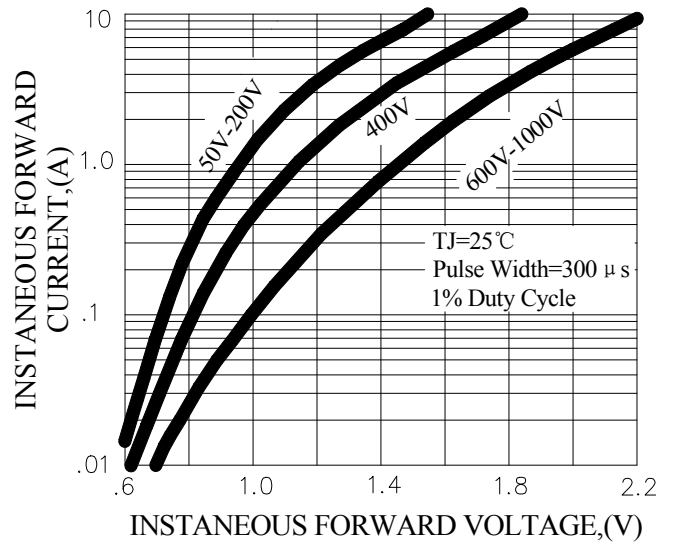


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

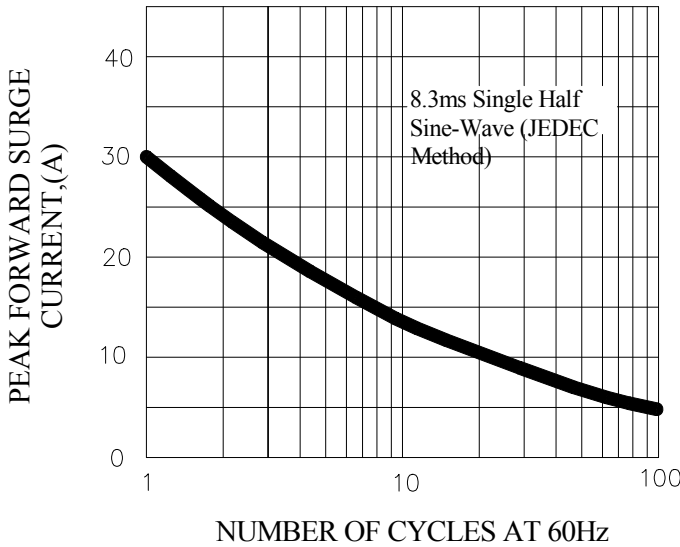


FIG.4-TYPICAL REVERSE CHARACTERISTICS

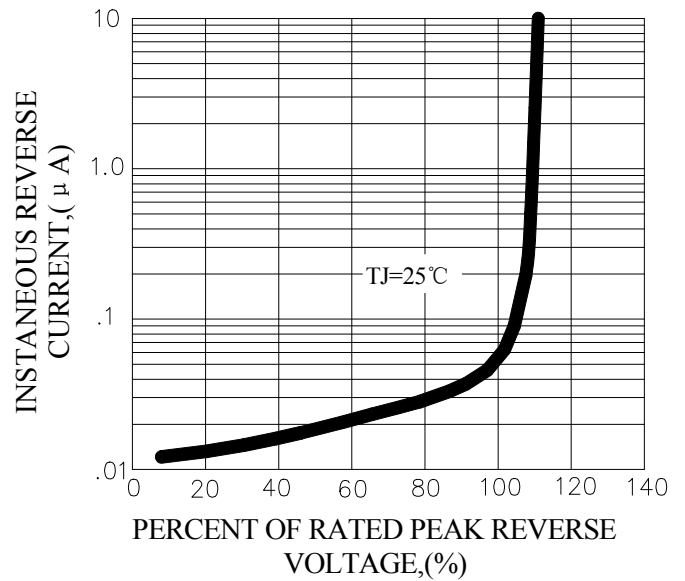


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

