



SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

US1A THRU US1M

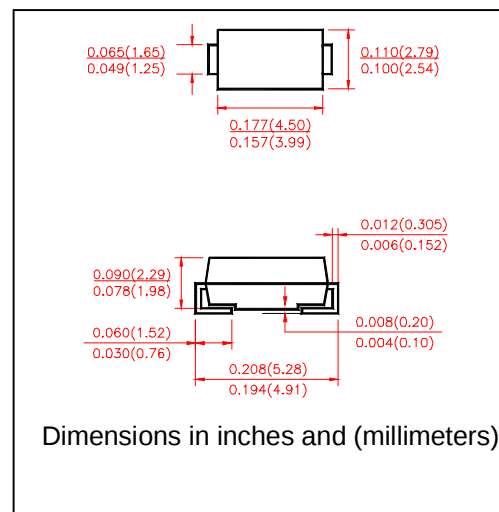
VOLTAGE RANGE
50 to 1000 Volts
CURRENT
1.0 Ampere

FEATURES

- Plastic package has underwrites laboratory flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- Fast switching for high efficiency
- High temperature soldering
260°C/10 second

MECHANICAL DATA

- Case: JEDED DO-214AC molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per
- MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

DO-214AC(SMA)


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%.

		SYMBOLS	US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNIT
Maximum Repetitive 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 T _A =55℃		I _(AV)	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage per at 1.0A		V _F	1.0			1.30	1.70			Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	T _A = 25℃	I _R	5.0							μA
	T _A = 125℃		100							
Typical Reverse Recovery Time Test conditions I _F =0.5A, I _R =1.0A, I _{RR} =0.25A		t _{rr}	50				100			nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)		C _J	20				15			pF
Typical Thermal Resistance (Note 1)		R _{θJA}	88							℃/W
		R _{θJL}	28							
Operating Junction Temperature		T _J	(-55 to +150)							℃
Storage Temperature Range		T _{STG}	(-55 to +150)							℃

Notes:

1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.2×0.2" (5.0 × 5.0mm) copper pad areas.



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RATING AND CHARACTERISTIC CURVES US1A THRU US1M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

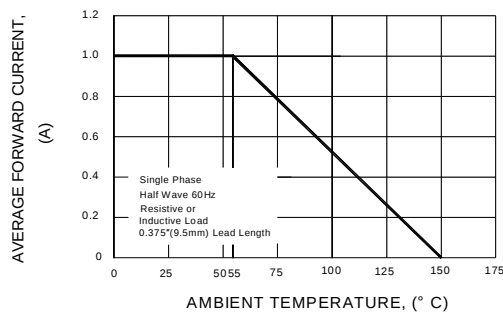


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

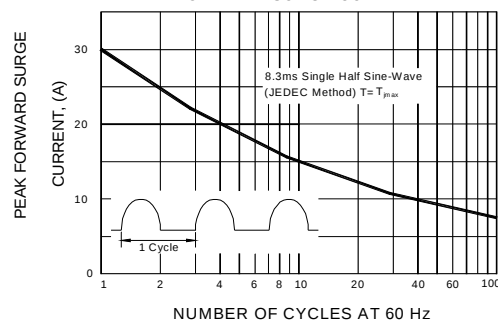


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

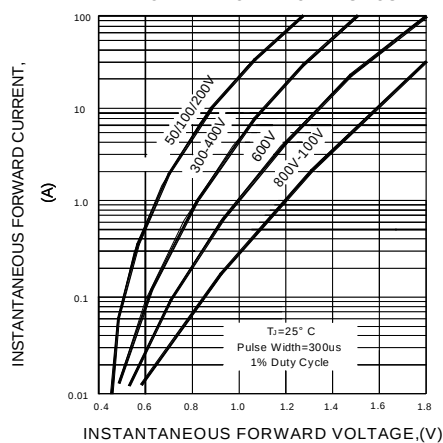


FIG.4-TYPICAL REVERSE CHARACTERISTICS

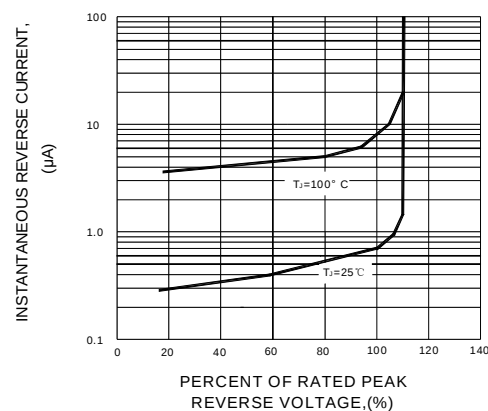


FIG.5-TYPICAL JUNCTION CAPACITANCE

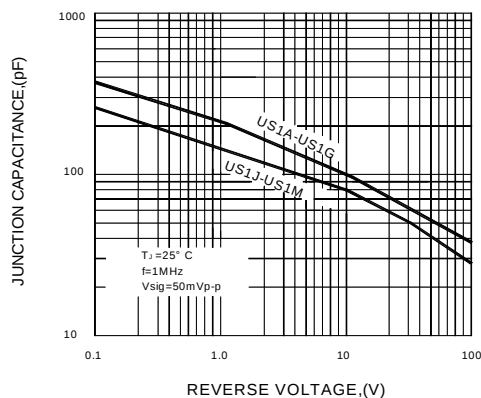


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

