Surface Mount High Efficiency Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief
- Fast switching speed for high efficiency
- Glass passivated chip junction
- High temperature soldering guaranteed: 250℃/10 seconds
- RoHS and REACH Compliance

Mechanical Data

Case:	JEDEC DO-214AB molded plastic over glass passivated chip
Polarity:	Color band denotes cathode end.
Terminal:	Solder plated, solderable per MIL-STD 750, Method 2026
Mounting Position:	/
Weight:	0.007 ounce, 0.25 gram

Maximum Ratings *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	US3A	US3B	US3D	US3G	US3J	US3K	US3M	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	**V**	
VRMS	Max RMS Voltage	35	70	140	280	420	560	700	**V**	
VDC	Max DC Blocking Voltage	50	100	200	400	600	800	1000	**V**	
I(AV)	Max Average Forward Rectified Current	3.0							**A**	TA=55℃ (Note 2)
IFSM	Peak Forward Surge Current, 8.3ms single half sine	100							**A**	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-55 to +150							℃	

Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	US3A	US3B	US3D	US3G	US3J	US3K	US3M	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.0		1.3			1.7		**V**	3.0A
RθJA	Typical Thermal Resistance	47							℃/W	Note 2
RθJL		17								
IR	Max DC Reverse Current at Rated DC Blocking Voltage	10							**μA**	TA=25℃
		200								TA=125℃
TRR	Maximum reverse recovery time	50			75				**nS**	Note 1
CJ	Typical Junction capacitance	80			50				**pF**	Measured at 1.0MHz/4.0V

Note:

1. Test conditions: I_F= 0.5A, I_R=1.0A, I_{RR} = 0.25A
2. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.3”x 0.3”(8.0 x 8.0 mm) copper pad areas.

US3A ~ US3M

RATINGS AND CHARACTERISTIC CURVES US3A THRU US3M

FIG.1—TYPICAL FORWARD CURRENT DERATING CURVE

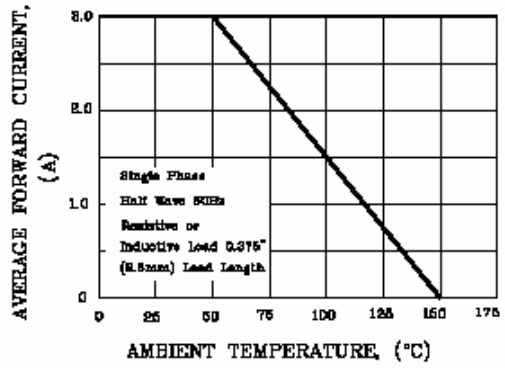


FIG.2—MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

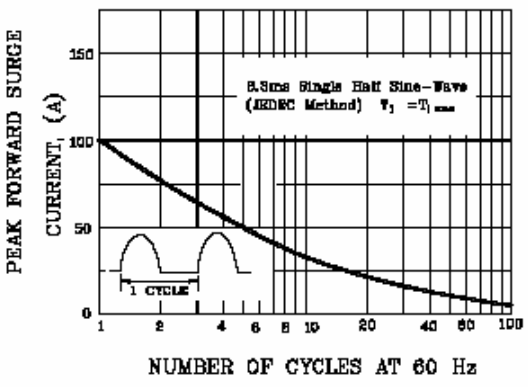


FIG.3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

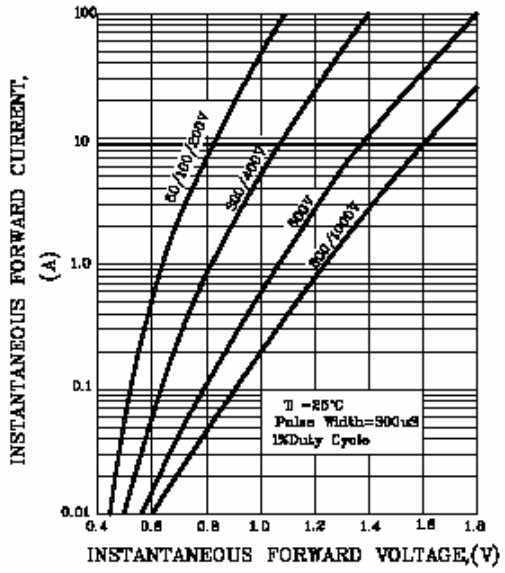


FIG.4—TYPICAL REVERSE CHARACTERISTICS

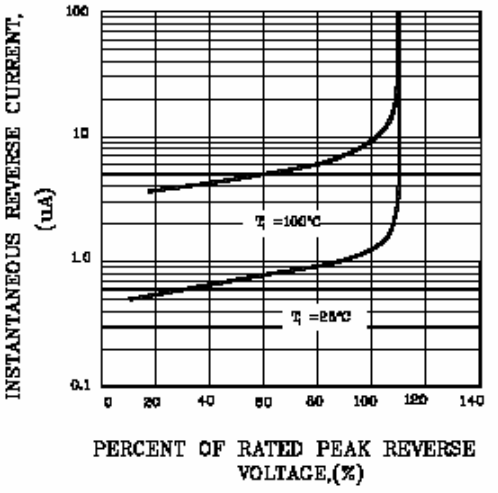


FIG.5—TYPICAL JUNCTION CAPACITANCE

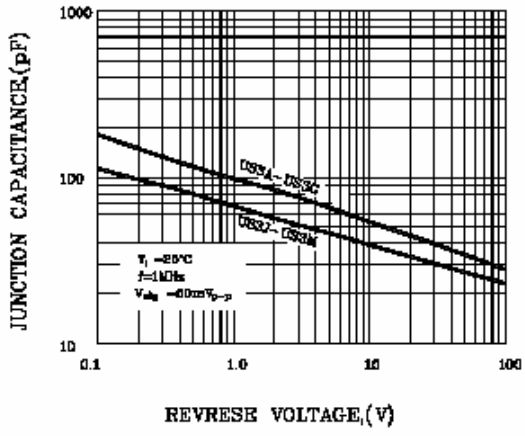
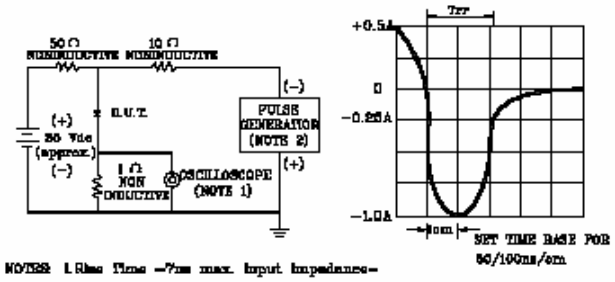


FIG.6—TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

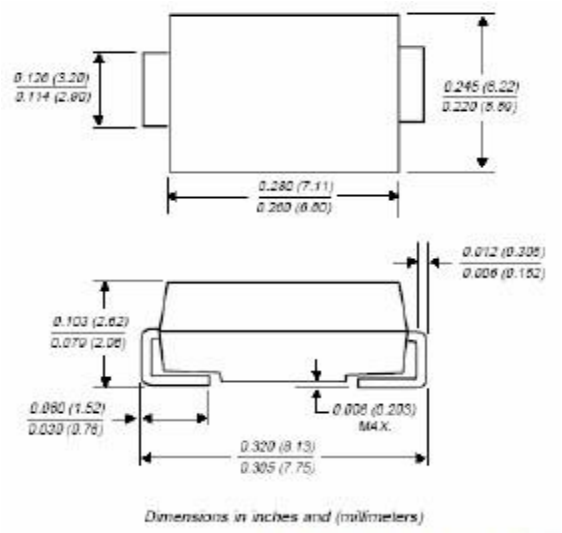


NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms

US3A ~ US3M

Dimensions in inches (mm)



DO-214AB (SMC)

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