Fast Recovery Rectifier

Features

- Fast switching speed for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
  260℃/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance

Mechanical Data

Case:	Transfer molded plastic
Polarity	Color band denotes cathode end
Epoxy:	UL94V – 0 rate flame retardant
Lead:	Plated axial lead, solderable per MIL-STD-202E method 208C
Mounting position:	Any
Weight:	0.014 ounce, 0.3 gram

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

Symbol	Description	BY296	BY297	BY298	BY299	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	100	200	400	800	**V**	
VRMS	Max RMS Voltage	70	140	280	560	**V**	
VDC	Max DC Blocking Voltage	100	200	400	800	**V**	
I(AV)	Max Average Forward Rectified Current	2.0				**A**	0.375 (9.5MM) TC=50℃
IFSM	Peak Forward Surge Current	70				**A**	JEDEC method
TJ,TSTG	Operating and Storage Temperature Range	-50 to +150, -50 to +150				**℃**	
TRR	Maximum Reverse Recovery Time	500				**nS**	Note 1

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

Symbol	Description	BY296	BY297	BY298	BY299	Unit	Conditions
VF	Max Instantaneous Forward Voltage	1.3				**V**	Drop per Bridge element 2.0A
IR	Max DC Reverse Current at Rated DC Blocking Voltage	5.0				**μA**	TA=25℃
		200				**mA**	TA=100℃
RθJA	Typical Thermal Resistance	40				**℃/W**	Note 2
CJ	Typical Junction Capacitance	25				**pF**	Measured at 1.0MHz / 4.0V

Note:

1. Reverse Recovery Test conditions: I_R=1.0A, V_R=30V,di/dt=50A/μS, I_{RR}=10% I_{RM}
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted.

BY296 ~ BY299

RATINGS AND CHARACTERISTIC CURVES BY296 THRU BY299

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

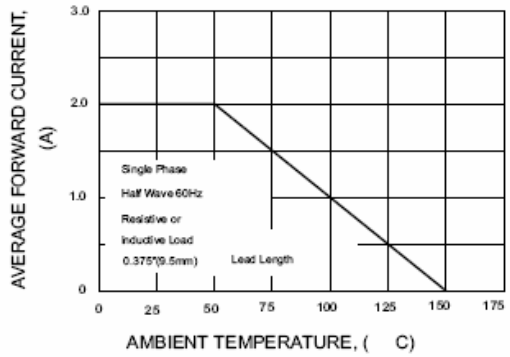


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

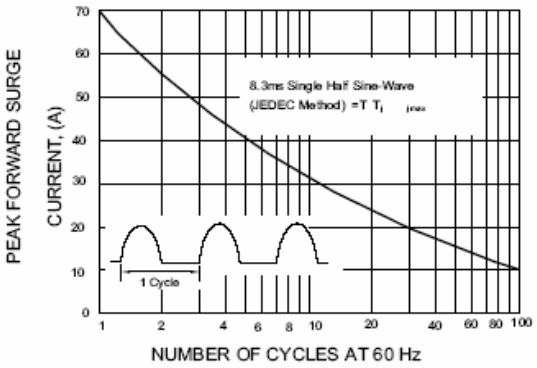


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

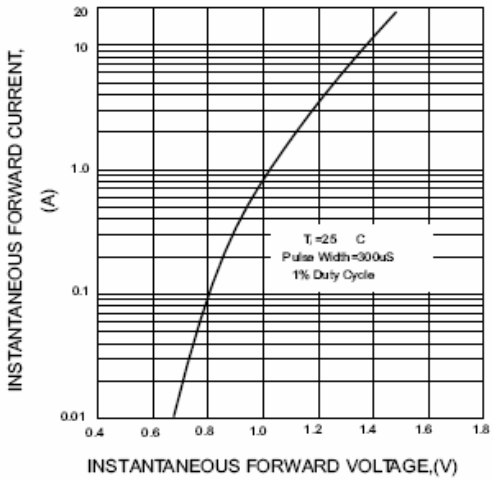


FIG.4-TYPICAL REVERSE CHARACTERISTICS

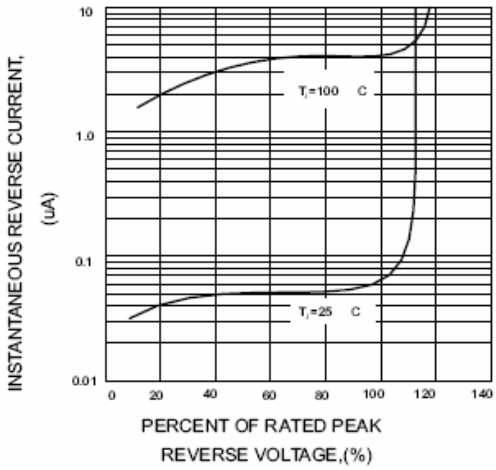


FIG.5-TYPICAL JUNCTION CAPACITANCE

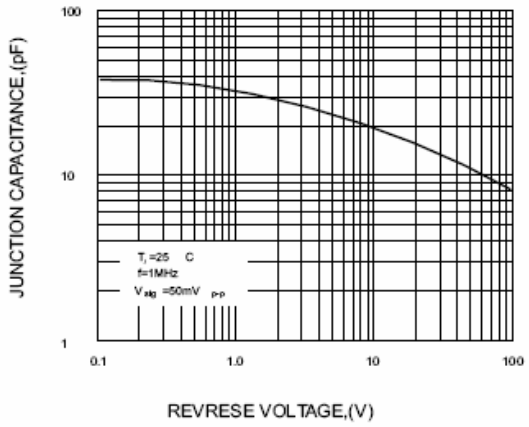
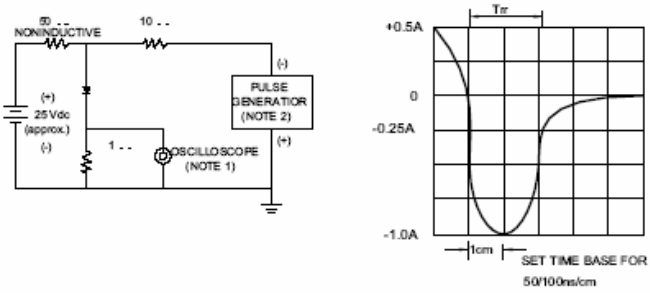
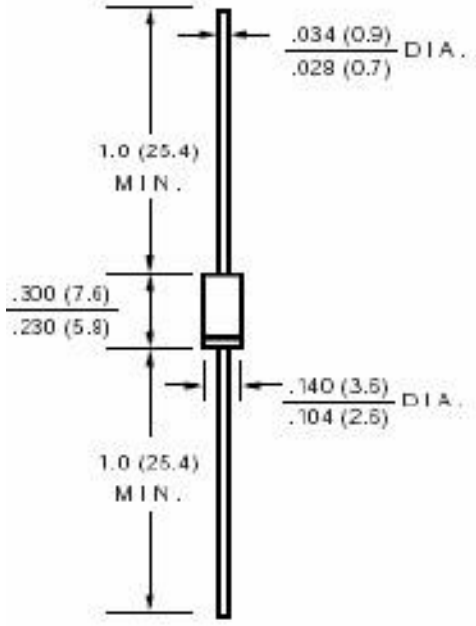


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



BY296 ~ BY299

Dimensions in inches (mm)



DO-15

Contact us:

US HEADQUARTERS

MEI SEMI INC.

2902 Corvin Drive, Santa Clara, CA95051, USA

Tel: 1-408-733-0808 Fax: 1-408-733-2828