

# 1 - $\phi$ BRIDGE RECTIFIER MB 25



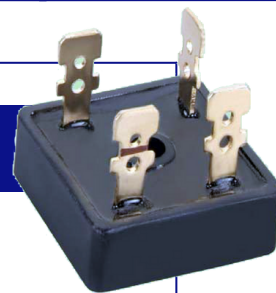
## FEATURES

- ☞ Reverse voltage upto 1600V
- ☞ Epoxy insulated

## TYPICAL APPLICATIONS

- ☞ Internal power supplies for electronic equipments
- ☞ DC Power supplies

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## TECHNICAL DATA

### DEVICE TYPE

$V_{RRM}$   
(V)

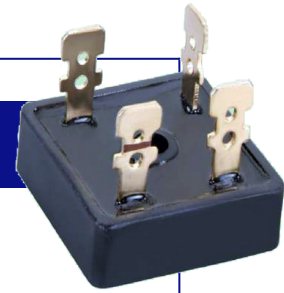
$V_{RSM}$   
(V)

MB25-10	1000	1100
MB25-12	1200	1300
MB25-16	1600	1700

### ABSOLUTE MAXIMUM RATINGS

SYMBOL	CONDITION	VALUES
$I_{DC}$	$T_{case} = 75^{\circ}C$	25 amp.
$I_{FSM}$ $I^2t$	$T_{vj} = 130^{\circ}C$ $T_{vj} = 130^{\circ}C$	350 amp. 600 A <sup>2</sup> S
$I_{RRM}$	$T_{vj} = 25^{\circ}C$ $T_{vj} = 130^{\circ}C$	1.0mA 2.0mA
$V_F$	$T_{vj} = 25^{\circ}C$ ( $I_F = 25$ Amp.); max	1.17 V
$V_o$ $R_o$	$T_{vj} = 25^{\circ}C$ ( $I_F = 25$ Amp.); max	0.85 V 5 mA
$R_{th(j-c)}$ $T_{vj}$ $T_{stg}$		1.2 $^{\circ}C/W$ 125 $^{\circ}C$ 125 $^{\circ}C$
Mounting torque		2.5 Nm
Weight	Approx.	20 gm
$V_{isol}$	A.C. 50hz r.m.s Duration 1 min	2500 V
Package Outline		IR-10,IR-11,IR-12,IR-13

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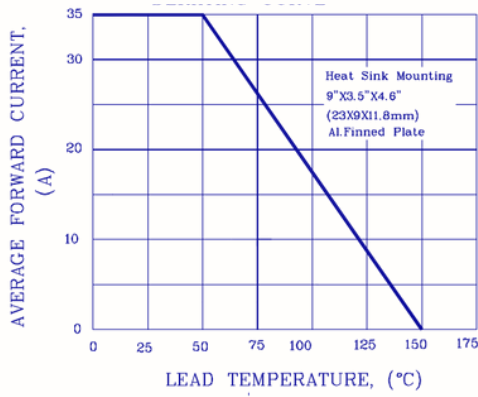
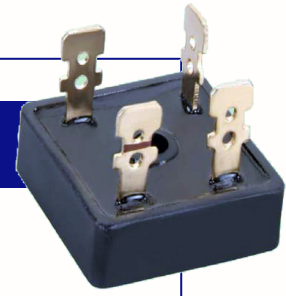
**ELECTRICAL CHARACTERISTICS OF IGBT**

	SYMBOL	MB3505 KBPC35005	MB351 KBPC3501	MB352 KBPC3502	MB354 KBPC3504	MB356 KBPC3506	MB358 KBPC3508	MB3510 KBPC3510	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 Output Current, at $T_C=50^\circ\text{C}$ (Note1,2)	$I_{(AV)}$	35							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	400							Amps	
Rating for Fusing( $t<8.3\text{ms}$ )	$I^2T$	664							$\text{A}^2\text{S}$	
Maximum Instantaneous Forward Voltage at 17.5A	$V_F$	1.1							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	$I_R$							10	$\mu\text{Amps}$
	$T_A=125^\circ\text{C}$								1.0	mAmps
Isolation Voltage from case to lugs	$V_{ISO}$	2500							$V_{AC}$	
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							$^\circ\text{C}/\text{W}$	
Operating Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$	

**NOTES:**

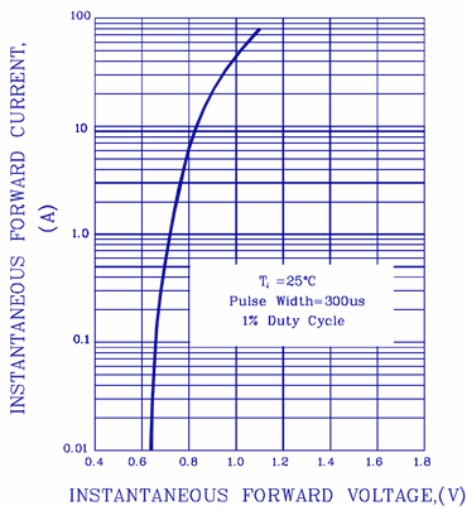
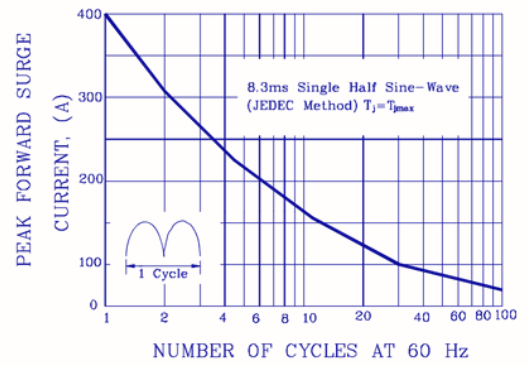
- Unit mounted on 9"×3.5"×4.6"(23×9×11.8mm) Al. finned plate.
- Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

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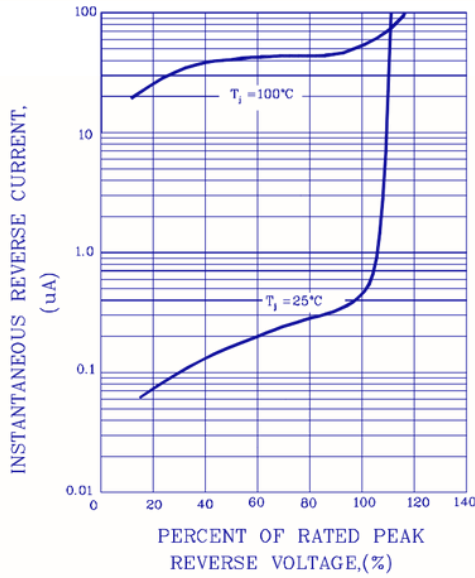
**FIG. 1** typical forward current derating curve

**FIG. 2** maximum non-repetitive peak forward surge current



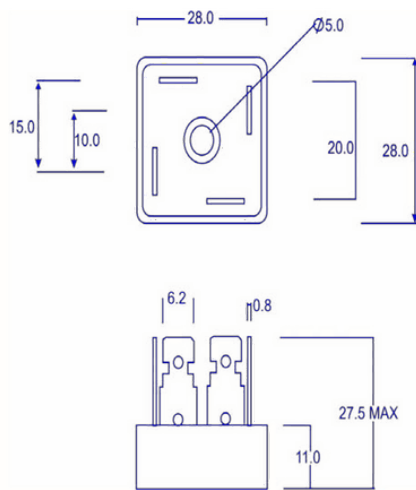
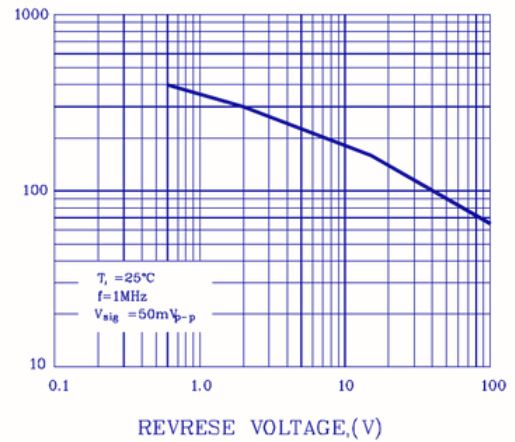
**FIG. 3** typical instantaneous forward characteristics

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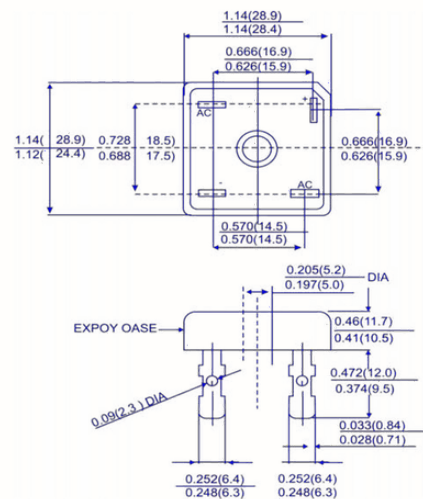


**FIG. 4** typical reverse characteristics

**FIG. 5** typical junction capacitance



**IR-10**

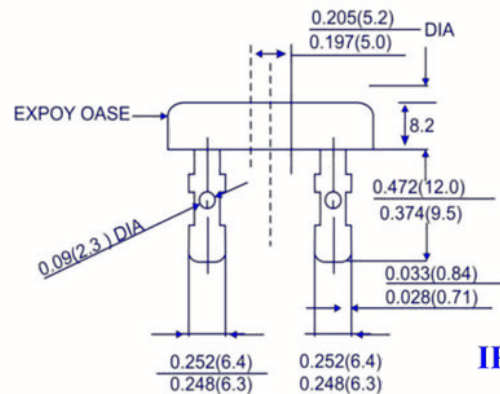
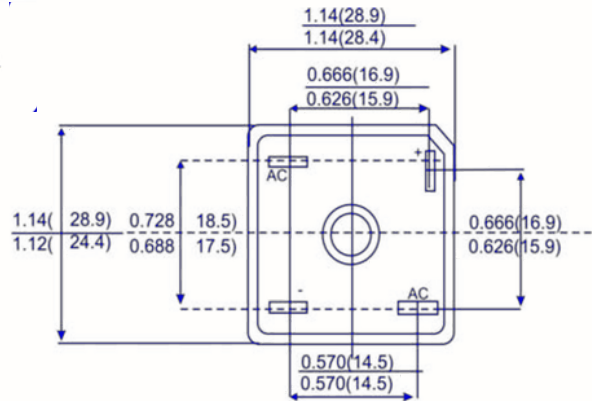
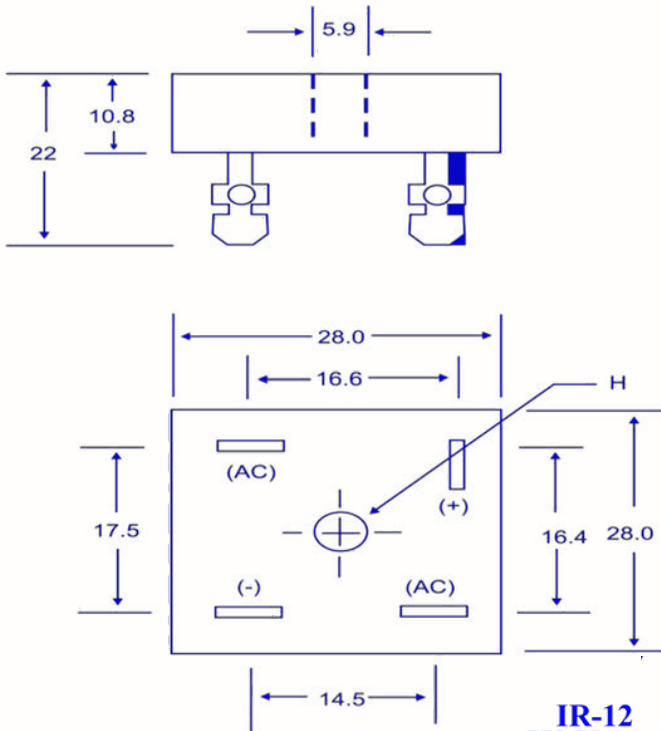


**IR-11**

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**PACKAGE OUTLINE**



all dimensions in mm