

**Miniature Glass Passivated Single Phase Surface Mount Bridge Rectifiers**
**Reverse Voltage 50 to 1000 Volts      Forward Current 0.8 Ampere**

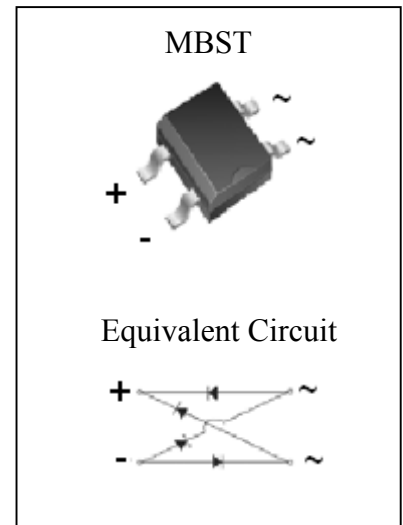
# MB05ST08 thru MB10ST08

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Save space on printed circuit boards
- Glass passivated chip junction
- High surge overload rating: 30A peak

## Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: Pure tin plated, solderable per MIL-STD-750 method 2026
- High temperature soldering guaranteed : 260°C/10 seconds, 0.375”(9.5mm) lead length, 5lbs(2.3kg) tension
- Mounting position: Any.
- Weight: 0.22gram, 0.078 oz.



## Maximum Ratings and Electrical Characteristics

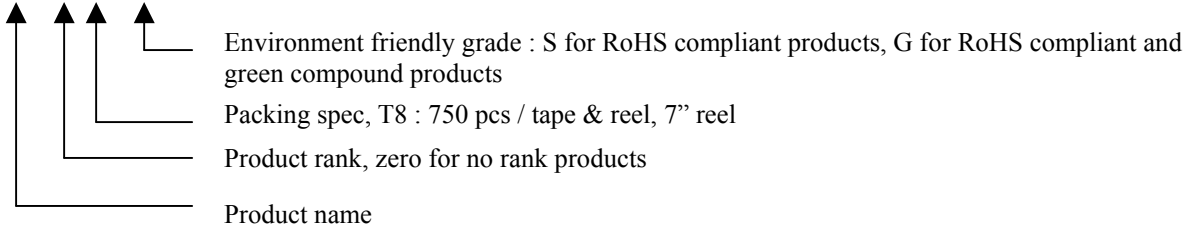
(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Type							Units
		MB05S T08	MB1S T08	MB2S T08	MB4S T08	MB6S T08	MB8S T08	MB10S T08	
Repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg at 0.4A	V <sub>F</sub>	1							V
Maximum average forward output rectified current @T <sub>a</sub> =40°C	I <sub>F(AV)</sub>	0.8							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							A
Maximum DC reverse current at rated DC blocking voltage per leg	I <sub>R</sub>	5							μA
		500							
Typical thermal resistance per leg	R <sub>θJA</sub>	75							°C/W
	R <sub>θJL</sub>	20							
	R <sub>θJC</sub>	24							
Typical diode junction capacitance @f=1MHz and applied 4V reverse voltage	C <sub>J</sub>	25							pF
Operating junction and storage temperature range	T <sub>J</sub> ; T <sub>stg</sub>	-55 ~ +150							°C



**Ordering Information**

Device	Package	Shipping
MBXXST08-0-T8-X	MBST (Pb-free lead plating and halogen-free package)	750 pcs / tape & reel



**Characteristic Curves**

FIG 1-TYPICAL FORWARD CURRENT DERATING CURVE

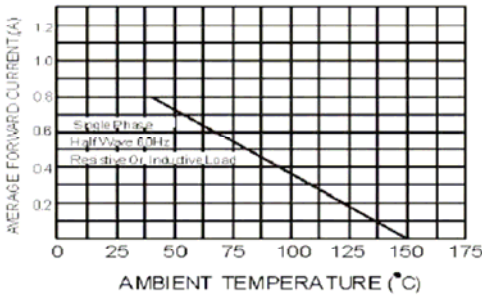


FIG 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

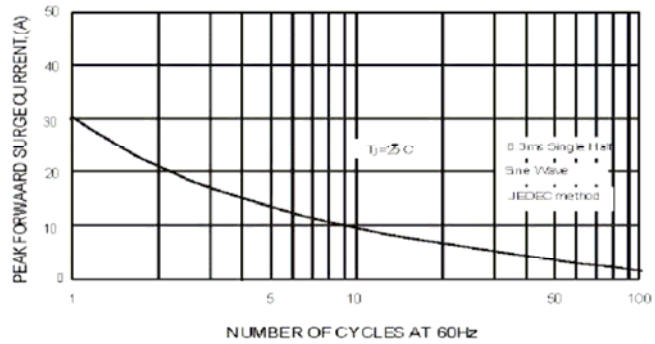


FIG.3-TYPICAL FORWARD CHARACTERISTICS

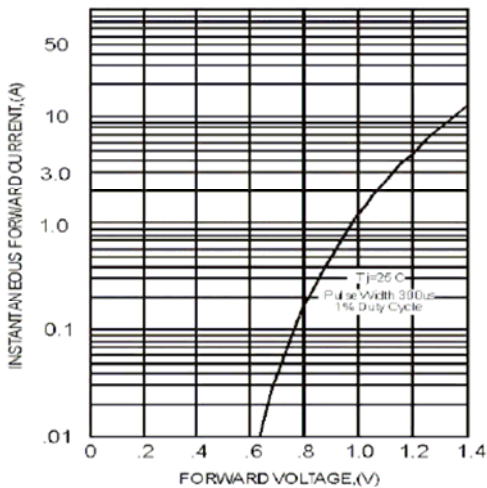
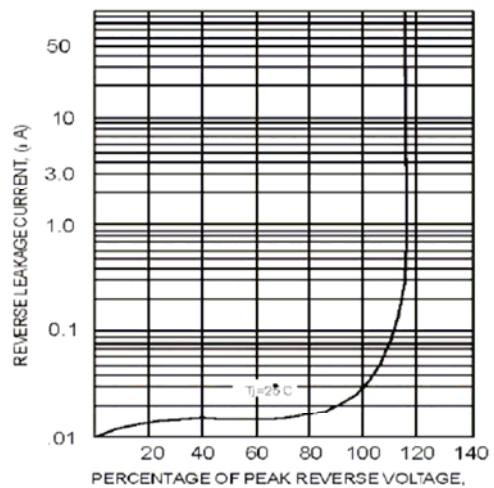
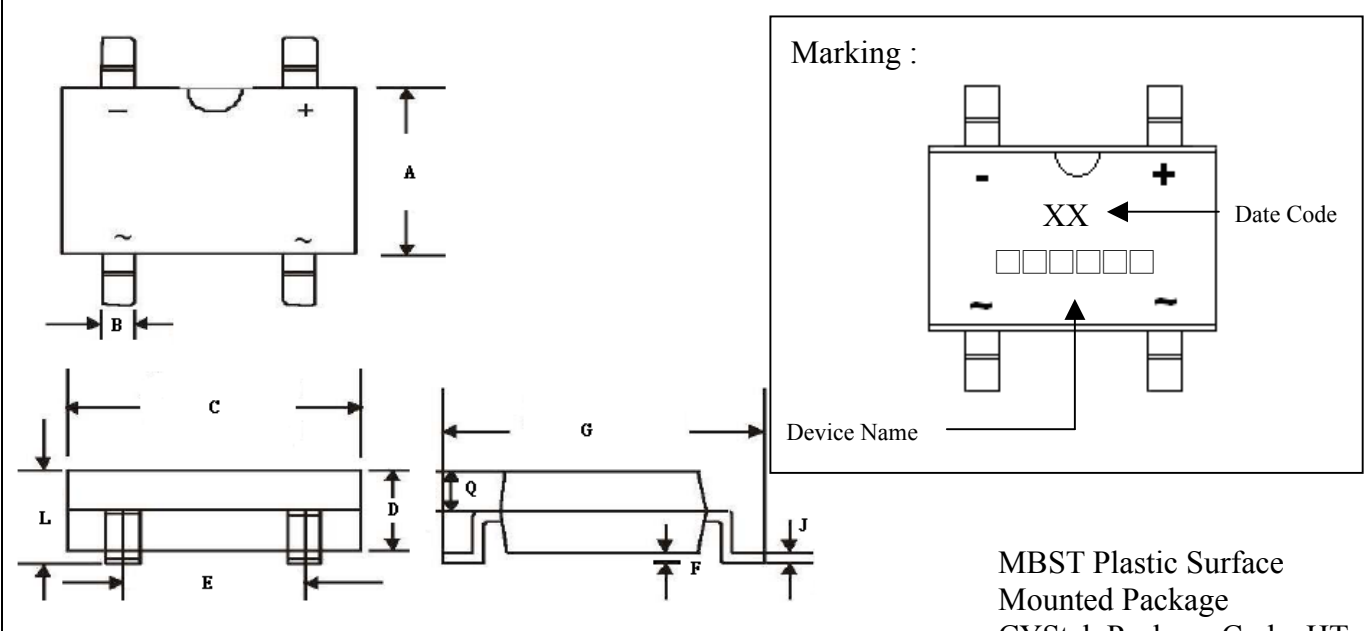


FIG.4-TYPICAL REVERSE CHARACTERISTICS



**MBST Dimension**



Marking :

MBST Plastic Surface Mounted Package  
 CYStek Package Code: HT

Type	MB05ST08	MB1ST08	MB2ST08	MB4ST08	MB6ST08	MB8ST08	MT10ST08
Marking	05ST08	1ST08	2ST08	4ST08	6ST08	8ST08	10ST08

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.165	0.181	4.200	4.600	F	-	0.008	-	0.200
B	0.023	0.031	0.600	0.800	G	-	0.275	-	7.000
C	0.177	0.193	4.500	4.900	J	0.006	0.010	0.150	0.250
D	0.049	0.057	1.250	1.450	L	-	0.650	-	1.650
E	0.900	0.106	2.300	2.700	Q	0.024	0.028	0.600	0.700

Notes : 1.Controlling dimension : millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material :**

- Lead : Pure tin plated.
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0.

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