

**Miniature Glass Passivated Single Phase Surface Mount Bridge Rectifiers**
**Reverse Voltage 50 to 1000 Volts      Forward Current 0.5 Ampere**

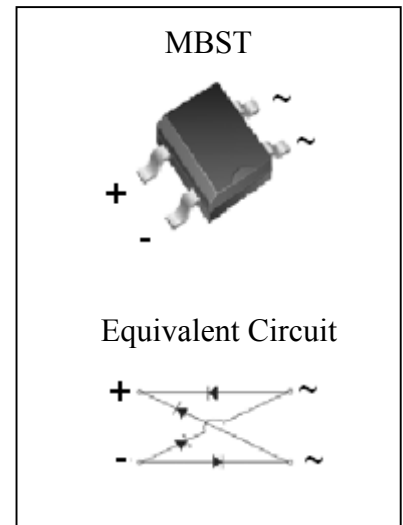
# MB05ST05 thru MB10ST05

## 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

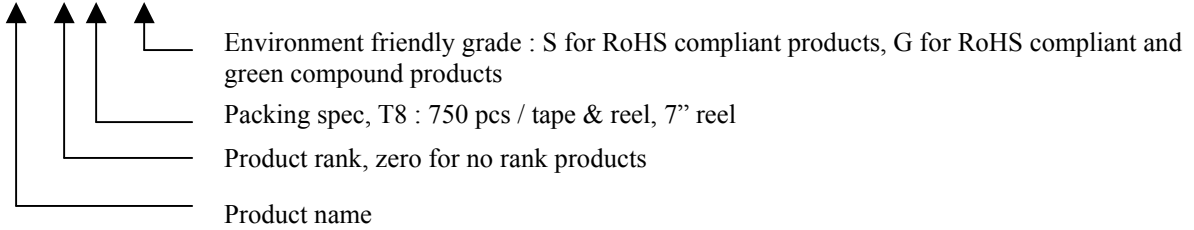
(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Type							Units
		MB05S T05	MB1S T05	MB2S T05	MB4S T05	MB6S T05	MB8S T05	MB10S T05	
Repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg at 0.4A	VF	1							V
Maximum average forward output rectified current @Ta=40°C	IF(AV)	0.5							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	IFSM	30							A
Maximum DC reverse current at rated DC blocking voltage per leg	IR	5							µA
		500							
Typical thermal resistance per leg	RθJA	75							°C/W
	RθJL	20							
	RθJC	24							
Typical diode junction capacitance @f=1MHz and applied 4V reverse voltage	CJ	25							pF
Operating junction and storage temperature range	TJ ;Tstg	-55 ~ +150							°C



**Ordering Information**

Device	Package	Shipping
MBXXST05-0-T8-X	MBST (Pb-free lead plating and halogen-free package)	750 pcs / tape & reel



**Characteristic Curves**

FIG 1-TYPICAL FORWARD CURRENT DERATING CURVE

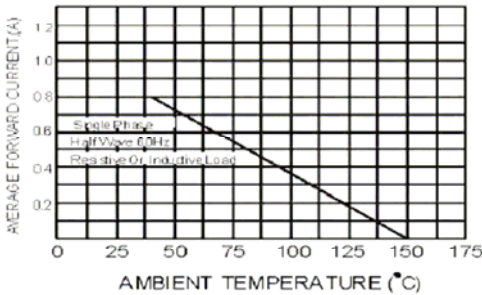


FIG 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

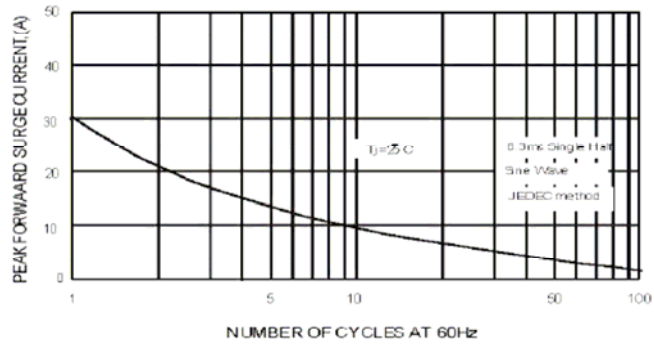


FIG.3-TYPICAL FORWARD CHARACTERISTICS

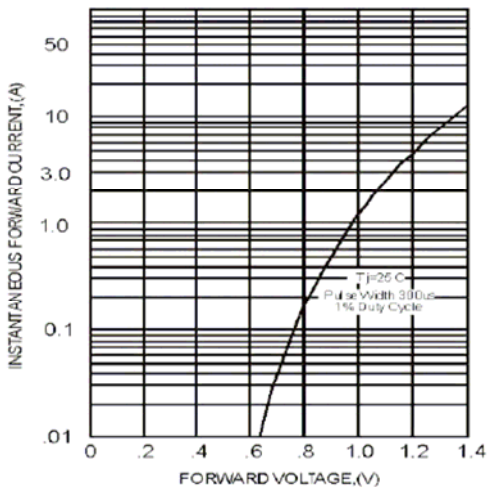
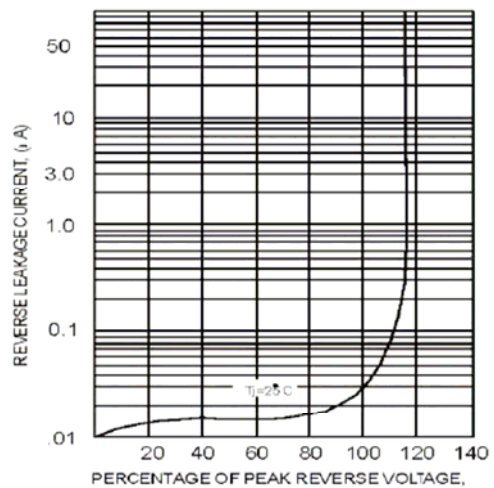
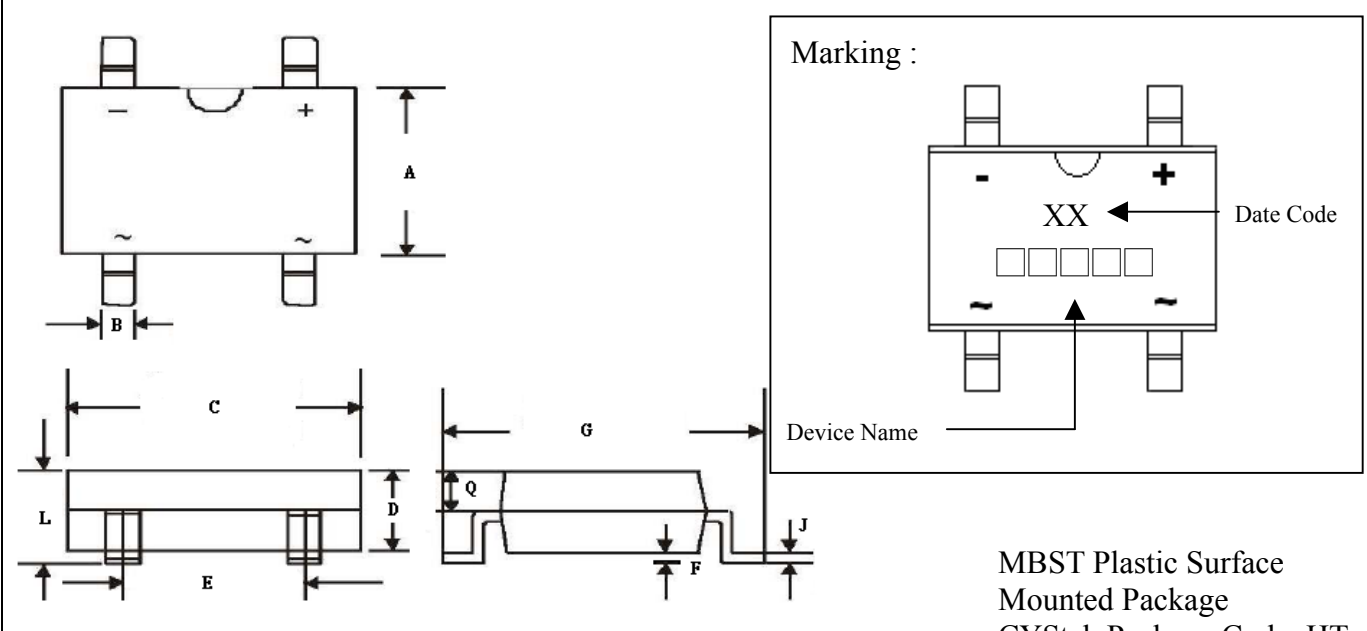


FIG.4-TYPICAL REVERSE CHARACTERISTICS



**MBST Dimension**



Marking :

MBST Plastic Surface Mounted Package  
 CYStek Package Code: HT

Type	MB05ST05	MB1ST05	MB2ST05	MB4ST05	MB6ST05	MB8ST05	MB10ST05
Marking	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S

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.

**Important Notice:**

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of CYStek.
- CYStek reserves the right to make changes to its products without notice.
- CYStek **semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- CYStek assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.