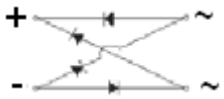
Miniature Glass Passivated Single Phase Surface Mount Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 0.8 Ampere

MB05ST08 thru MB10ST08

MBST

Equivalent Circuit



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_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage drop per leg at 0.4A		V_F	1							V
Maximum average forward output rectified current @Ta=40°C		$I_{F(AV)}$	0.8							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	30							A
Maximum DC reverse current at rated DC blocking voltage per leg	T_A=25°C	I_R	5							μA
	T_A=100°C		500							
Typical thermal resistance per leg		$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	75 20 24							°C /W
Typical diode junction capacitance @f=1MHz and applied 4V reverse voltage		C_J	25							pF
Operating junction and storage temperature range		T_J ;Tstg	-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

Environment friendly grade : S for RoHS compliant products, G for RoHS compliant and green compound products

Packing spec, T8 : 750 pcs / tape & reel, 7" reel

Product rank, zero for no rank products

Product name

Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

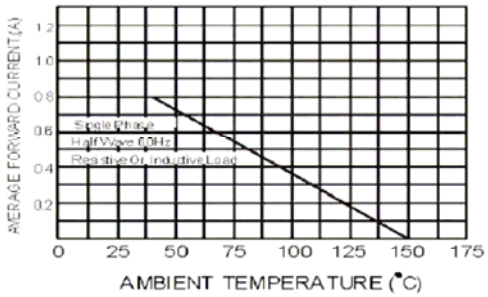


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

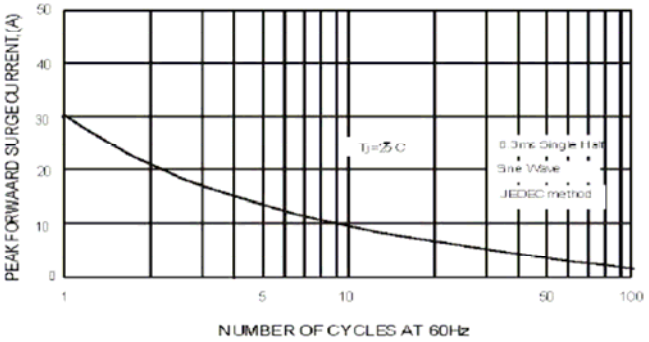


FIG.3-TYPICAL FORWARD CHARACTERISTICS

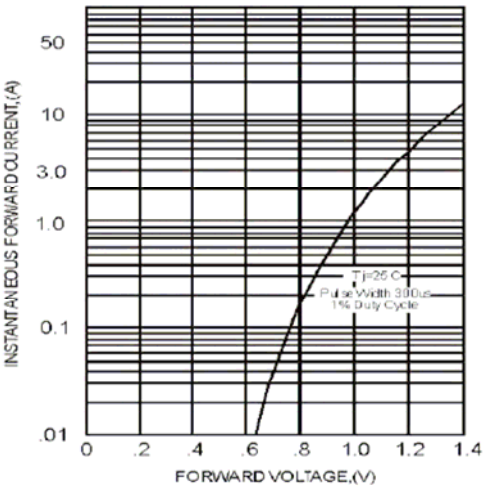
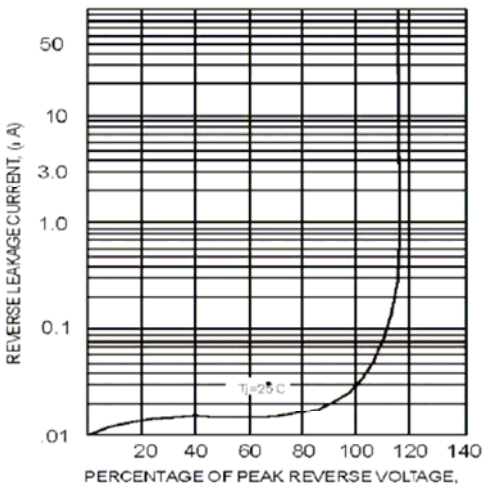
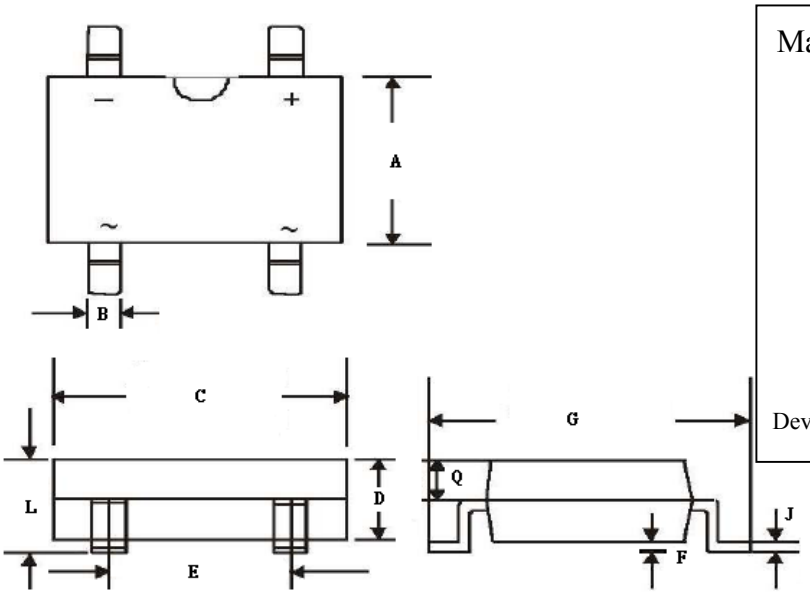
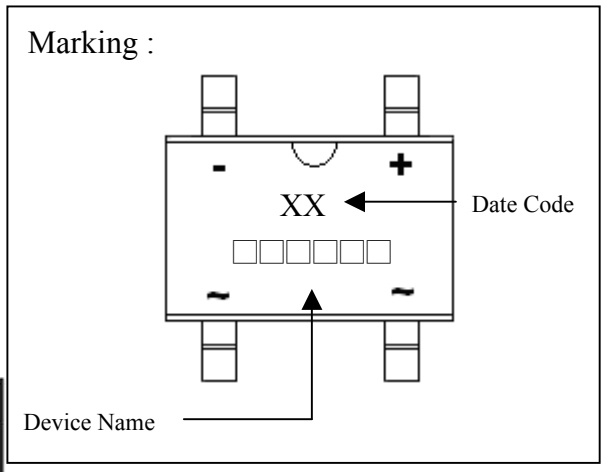


FIG.4-TYPICAL REVERSE CHARACTERISTICS



MBST Dimension





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.