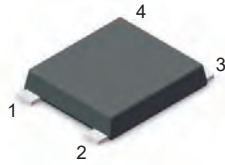


Special For DC-AC Rectifier Bridge



MSB Package

PINNING

| PIN | DESCRIPTION |
|-----|--------------------|
| 1 | Input Pin (~) |
| 2 | Input Pin (~) |
| 3 | Output Anode (+) |
| 4 | Output Cathode (-) |

Features

- Glass Passivated Chip Junction
- Reverse Voltage - 300V/600V
- Forward Current - 4A
- High Surge Current Capability
- Designed For Surface Mount Application

Benefits

- Case: MSB
- Terminals: Solderable Per MIL-STD-750
- Reduced power loss and switching transistor

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

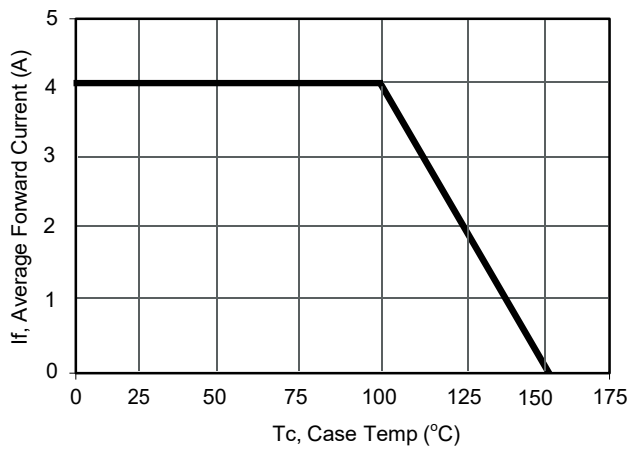
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbols | MSB403E50 | MSB406E50 | Units |
|---|--|------------|-----------|------------------|
| Maximum Repetitive Peak Reverse Voltage | VRRM | 300 | 600 | V |
| Maximum RMS voltage | VRMS | 210 | 420 | V |
| Maximum DC Blocking Voltage | VDC | 300 | 600 | V |
| Average Rectified Output Current | I _o | 4.0 | | A |
| Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A | T _{rr} | 75 | | ns |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | IFSM | 120 | | A |
| I ² t rating for fusing (1ms< t < 8.3ms) | I ² t | 59.7 | | A ² S |
| Maximum Forward Voltage at 2.0 A | V _F | 1.0 | 1.30 | V |
| Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C | I _R | 10 500 | | μA |
| Typical Junction Capacitance (Note1) | C _j | 40 | | pF |
| Operating and Storage Temperature Range | T _j , T _{stg} | -55 ~ +175 | | °C |
| Typical thermal resistance (Note 2) | R _{thJC} R _{thJA} | 6 12 | | °C/W |

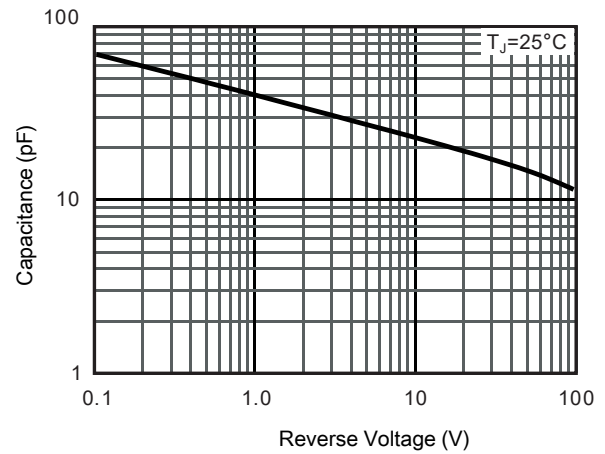
Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

2. Thermal resistance from Junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 15mm*12mm*1.6mm AL pad attach 195mm*195mm*10mm steel plate

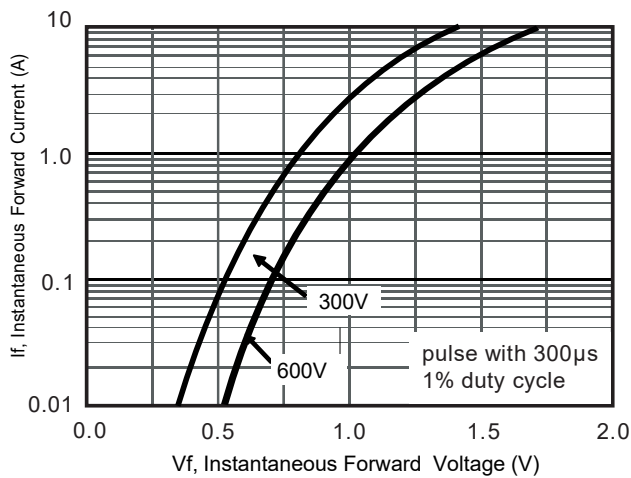
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



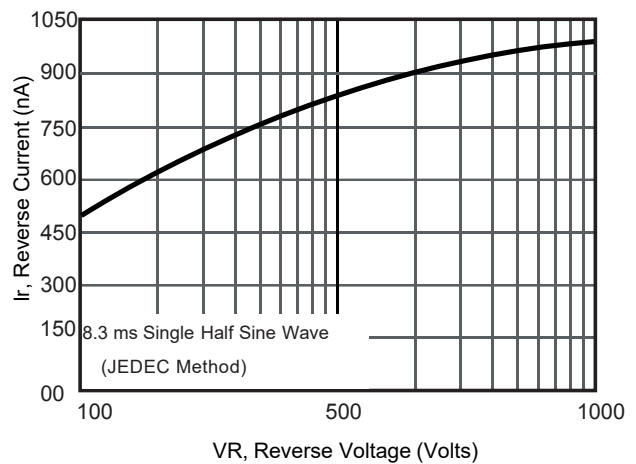
Current Derating, Case



Typical Junction Capacitance



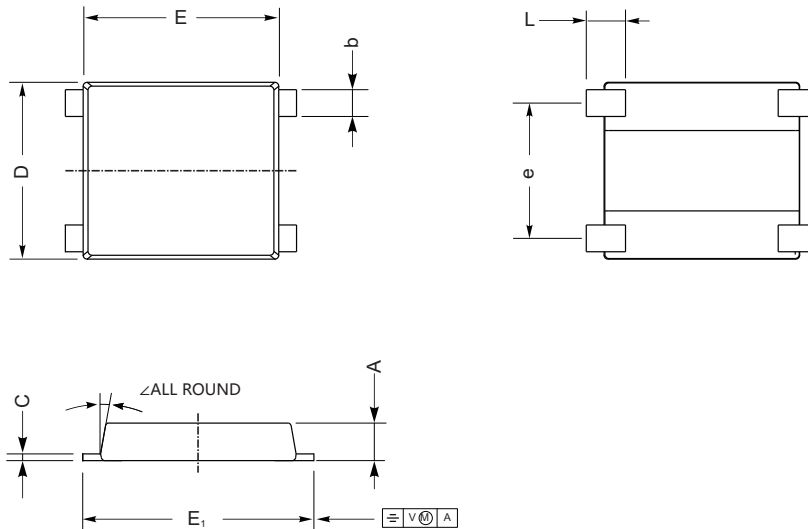
Typical Forward Voltage



Typical Reverse Current

PACKAGE OUTLINE DIMENSIONS

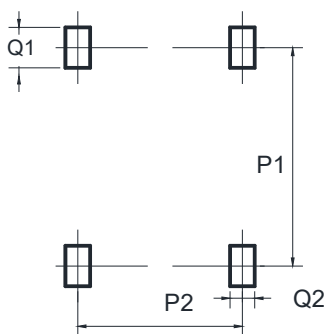
MSB



MSB mechanical data

| UNIT | | A | C | D | E | E1 | L | e | b | ∠ |
|------|-----|-----|------|-----|-----|-----|------|-----|------|----|
| mm | max | 1.5 | 0.29 | 7.0 | 7.6 | 8.9 | 1.6 | 5.3 | 1.15 | 7° |
| | min | 1.3 | 0.17 | 6.2 | 7.1 | 8.4 | 1.0 | 4.9 | 0.95 | |
| mil | max | 59 | 12 | 276 | 299 | 350 | 63 | 209 | 45 | |
| | min | 51 | 7 | 244 | 280 | 331 | 39.3 | 193 | 37 | |

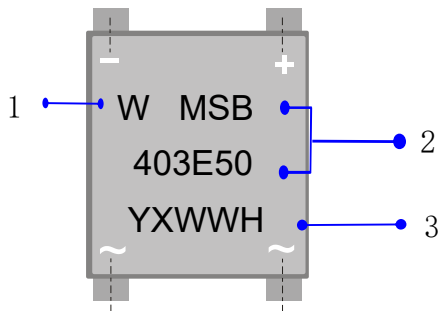
MSB Suggested Pad Layout



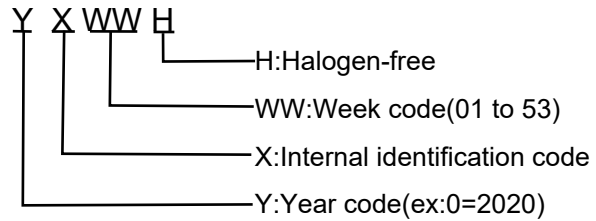
| UNIT | | P1 | P2 | Q1 | Q2 |
|------|-----|--------|--------|------|-------|
| mm | min | 8.30 | 5.10 | 1.6 | 1.2 |
| mil | min | 326.77 | 200.79 | 63.0 | 47.25 |

Dimensions is millimeters

Marking Information

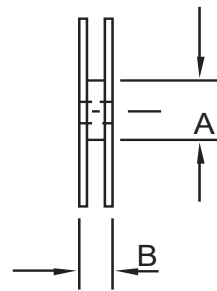
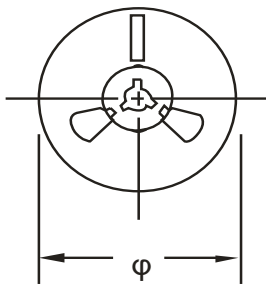


- ① Company Brand: W
- ② Product model : MSB403E50 or MSB406E50
- ③ PDC information:

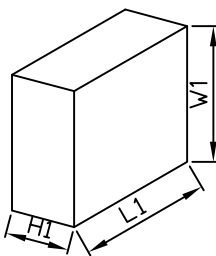


Packaging Information

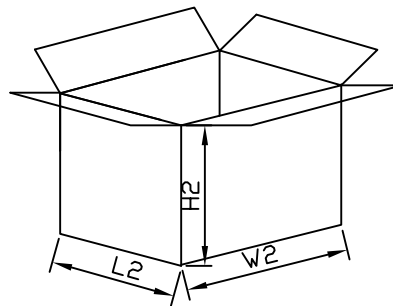
1.Reel Dimensions



2. Inside Box



3. Outside Box



Packaging Information

| NO | UNIT | Reel Dimensions | | | Inside Box | | | Outside Box | | |
|------|--|-------------------------------|-----|----|--------------------------|-----|----|----------------------------------|-----|-----|
| | | φ | A | B | L1 | W1 | H1 | L2 | W2 | H2 |
| Size | mm | 330 | 100 | 15 | 340 | 340 | 46 | 360 | 360 | 270 |
| QTY | PCS | Smallest package,3000PCS/reel | | | 6,000PCS,2 reel in total | | | 30,000PCS/carton,5boxes in total | | |
| Note | Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm | | | | | | | | | |