

	E502650
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Features

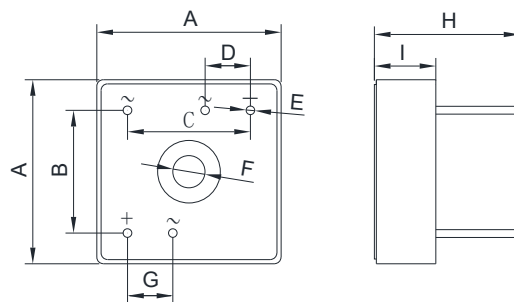
- Glass Passivated Chip Junction
- High Surge Current Capability
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value		Unit
		MT5010W	MT5016W	
Peak Repetitive Reverse Voltage	V_{RRM}	1000	1600	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
RMS Reverse Voltage	V_{RMS}	700	1120	V
Average Rectified Forward Current @ $T_C=60^\circ C$	$I_{F(AV)}$	50		A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	500		A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		1000		
I^2t Rating for Fusing @ $1ms \leq t \leq 8.3ms$	I^2t	1037		A ² s
Dielectric strength @ Terminals to Case, AC 1 Minute	V_{dis}	2.5		KV

**50 Amp
Three Phase Bridge
Rectifiers
1000V to 1600 Volts**

MT-W

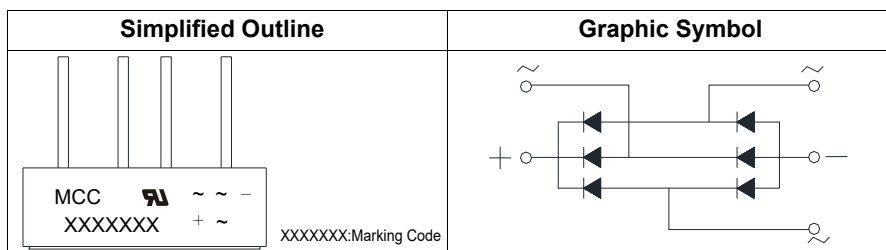


DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	1.102	1.142	28.00	29.00	
B	0.728	0.768	18.50	19.50	
C	0.728	0.768	18.50	19.50	
D	0.256	0.295	6.50	7.50	
E	0.043	0.059	1.10	1.50	
F	0.177	0.217	4.50	5.50	
G	0.256	0.295	6.50	7.50	
H	0.866	0.945	22.00	24.00	
I	0.362	0.402	9.20	10.20	

Marking Code

Part Number	Marking Code
MT5010W	MT5010W
MT5016W	MT5016W

Internal Structure



Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		0.85		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient			24		°C/W

Note: 1. Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

Mechanical Data

Recommend Mounting Torque: 5 kg•cm

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=25A; T_J=25^{\circ}C$			1.15	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			5 500	uA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		185		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

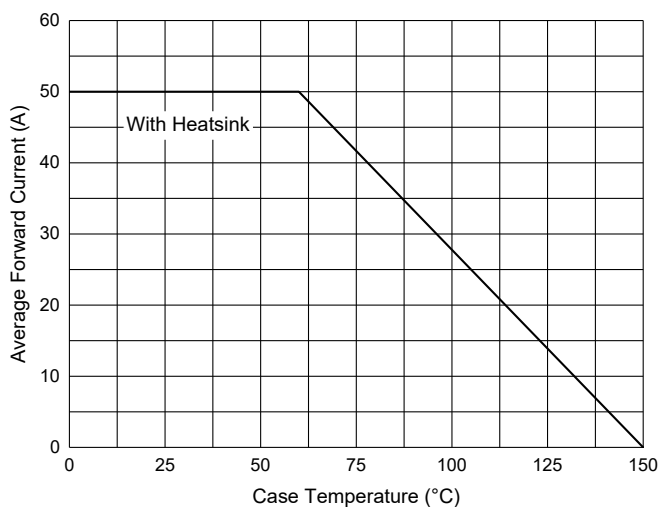


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

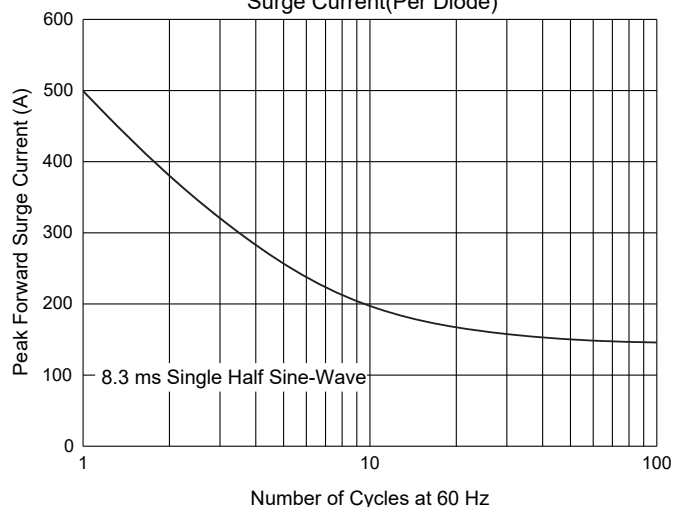


Fig. 3 - Typical Forward Characteristics (Per Diode)

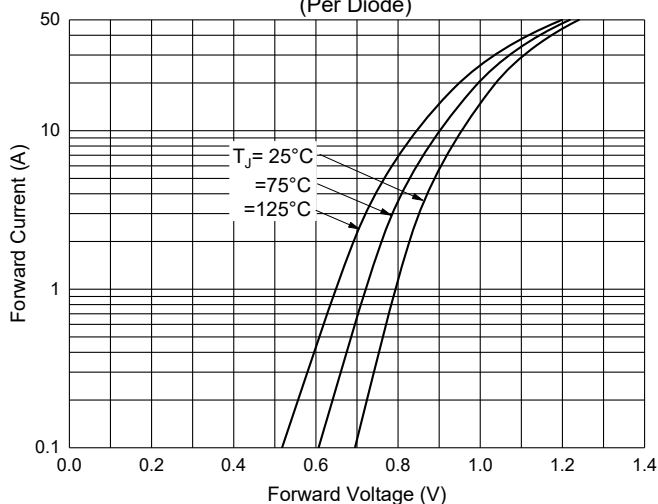


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

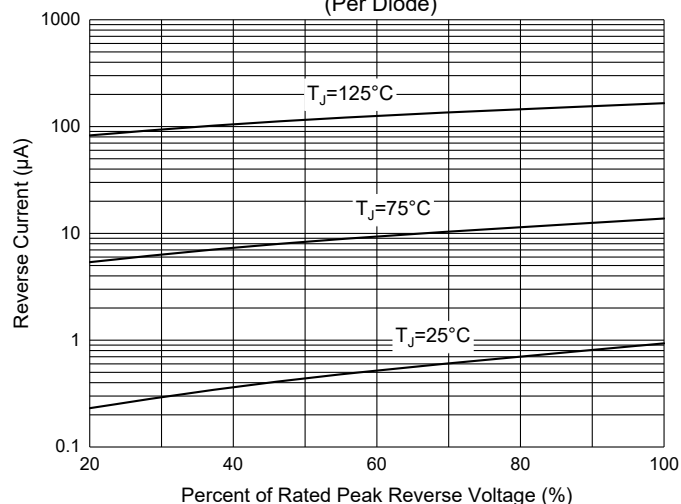
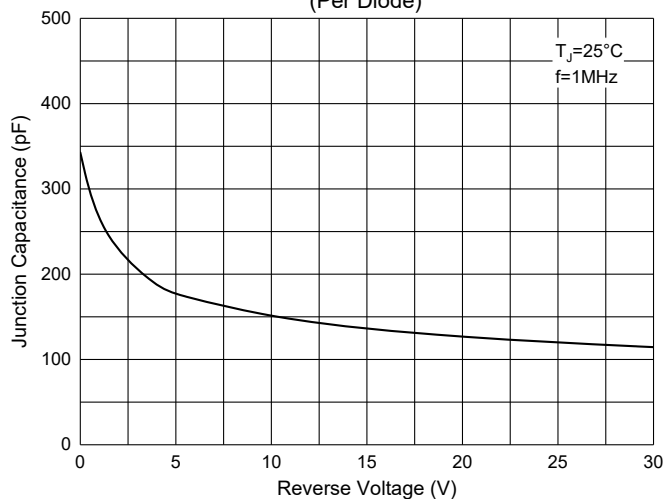


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Box,400pcs/Carton

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