

	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
- General Purpose 3 Phases Bridge Rectifier Applications

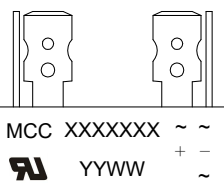
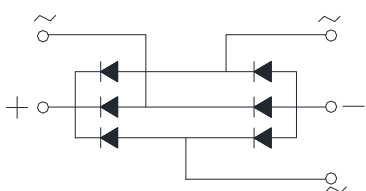
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		MT5004A	MT5006A	MT5008A	MT5010A	MT5012A	MT5014A	MT5016A	
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RWM}	400	600	800	1000	1200	1400	1600	
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	280	420	560	700	840	980	1120	V
Average Rectified Forward Current @ $T_C=55^{\circ}C$	$I_{F(AV)}$	50							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	500							A
I^2t Rating for Fusing @ $1ms \leq t \leq 8.3ms$	I^2t	1042							A ² s
Dielectric strength @ Terminals to Case, AC 1 Minute	V_{dis}	2.5							KV

Marking code

Part Number	Marking Code
MT5004A	MT5004A
MT5006A	MT5006A
MT5008A	MT5008A
MT5010A	MT5010A
MT5012A	MT5012A
MT5014A	MT5014A
MT5016A	MT5016A

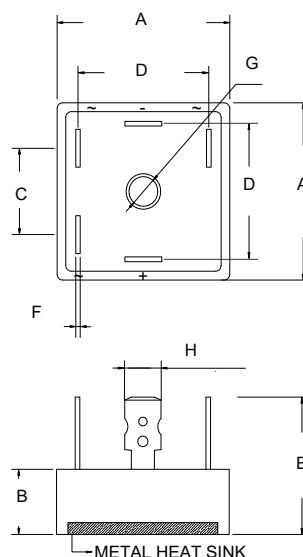
Internal Structure

Simplified Outline	Graphic Symbol
 <p>MCC XXXXXXXX ~ ~ YYWW + - XXXXXX: Marking Code YYWW: Date Code</p>	

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

50 Amp Three Phase Bridge Rectifiers 400 to 1600 Volts

MT-35A



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	1.110	1.134	28.20	28.80	
B	0.354	0.394	9.00	10.00	
C	0.610	0.650	15.50	16.50	
D	0.917	0.957	23.30	24.30	
E	/	0.944	/	25.00	
F	0.029	0.033	0.75	0.85	
G	0.197	0.217	5.00	5.50	
H	0.244	0.251	6.20	6.40	

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		0.88		°C/W

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

Mechanical Data

Mounting Torque*: 1 N•m(Recommend), 2 N•m(Maximum).

*Use M5 Screw and Washer.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=25A; T_J=25^{\circ}C$			1.2	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$			10	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		188		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

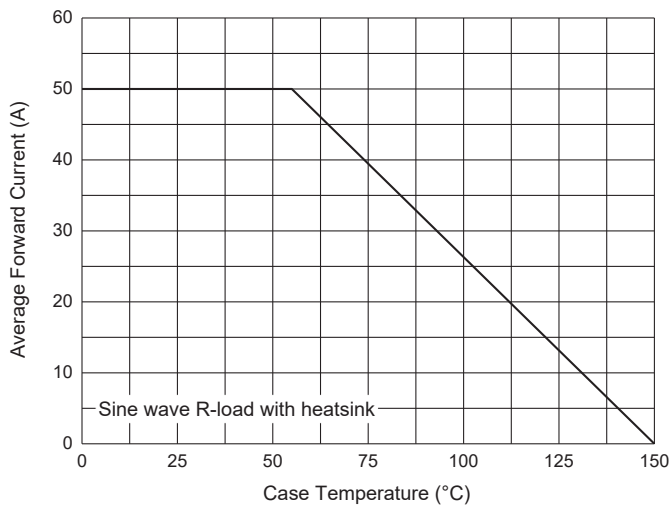


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

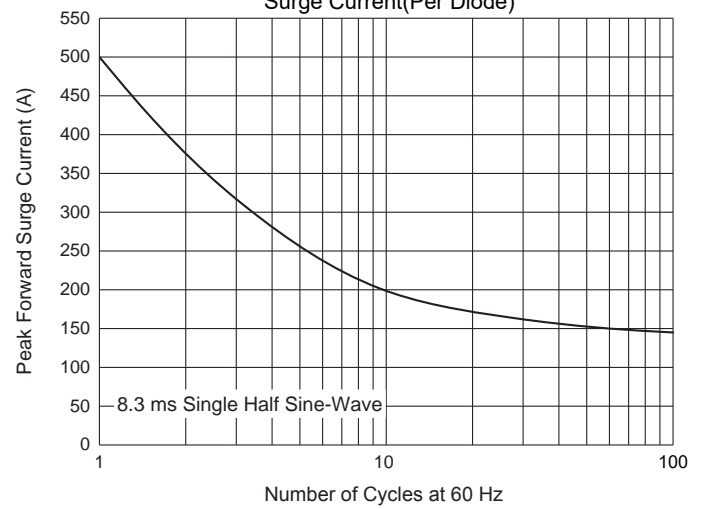


Fig. 3 - Typical Forward Characteristics (Per Diode)

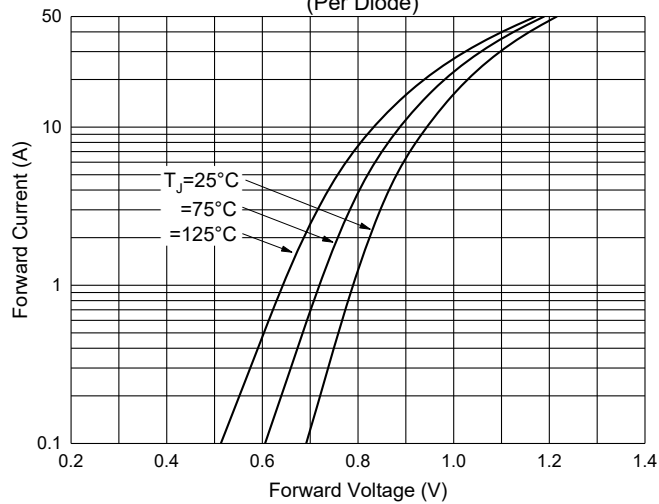


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

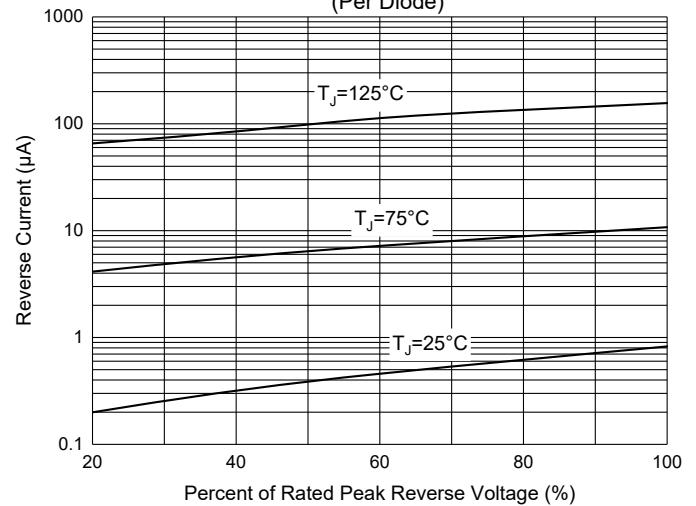
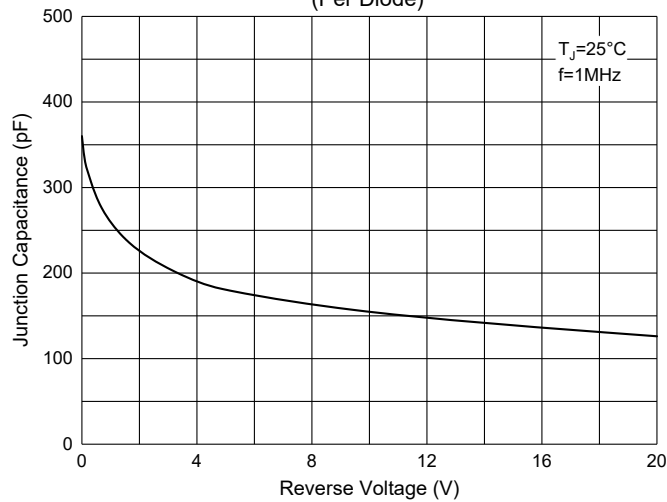


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



Ordering Information

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

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