

### Features

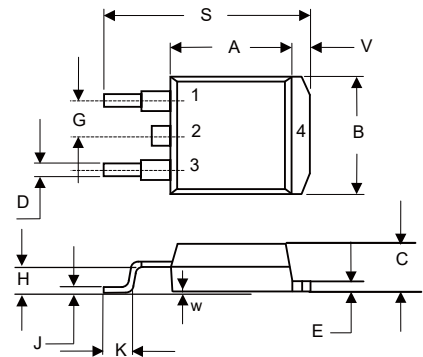
- Halogen Free. "Green" Device (Note 1)
- Fully Automotive Qualified to AEC-Q101
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

### Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	70	V
Average Rectified Forward Current	$I_{F(AV)}$	5	A
Per Diode Per Device		10	
Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave	$I_{FSM}$	150	A
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	$I^2t$	93	A <sup>2</sup> s

# 10 Amp Schottky Barrier Rectifiers 100 Volts

### D<sup>2</sup>-PAK



### DIMENSIONS

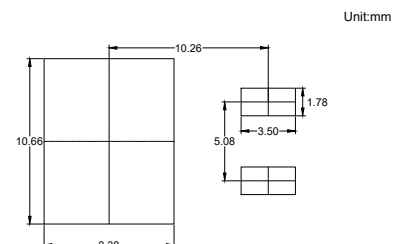
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.331	0.370	8.40	9.40	
B	0.378	0.417	9.60	10.60	
C	0.165	0.189	4.20	4.80	
D	0.027	0.037	0.68	0.94	
E	0.045	0.055	1.14	1.40	
G	0.10		2.54		TYP.
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.071	0.131	1.80	3.32	
S	0.575	0.625	14.60	15.87	
V	0.042	0.058	1.07	1.47	
W	0.000	0.010	0.00	0.25	

### Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1,3	Anode	<p>MCC MBRB10100CT YYWW YYWW = Date Code</p>	<p>1, 3 HEATSINK</p>
2,4	Cathode		

- Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

### Suggested Solder Pad Layout



### Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T <sub>J</sub>	Operating Junction Temperature Range		-55		175	°C
T <sub>stg</sub>	Storage Temperature Range		-55		175	°C
Rth(J-C)	Thermal Resistance from Junction to Case			2		°C/W

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage Per Diode	V <sub>F</sub>	I <sub>F</sub> =5A;T <sub>J</sub> =25°C		0.78	0.80	V
		I <sub>F</sub> =5A;T <sub>J</sub> =125°C		0.64	0.70	
Reverse Current Per Diode	I <sub>R</sub>	V <sub>R</sub> =100V;T <sub>J</sub> =25°C			10	uA
		V <sub>R</sub> =100V;T <sub>J</sub> =125°C			500	
Junction Capacitance Per Diode	C <sub>J</sub>	V <sub>R</sub> =4V;f=1MHz;T <sub>J</sub> =25°C		155		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

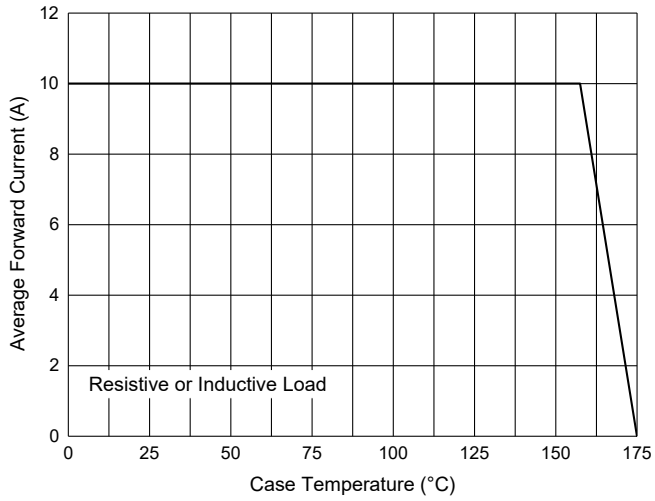


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

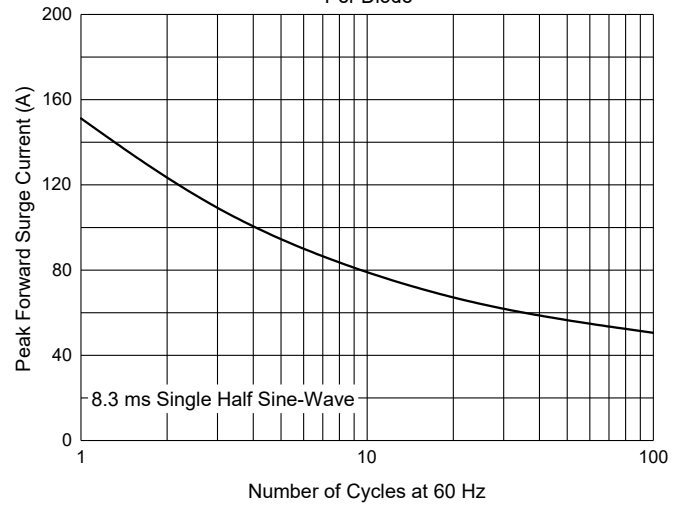


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

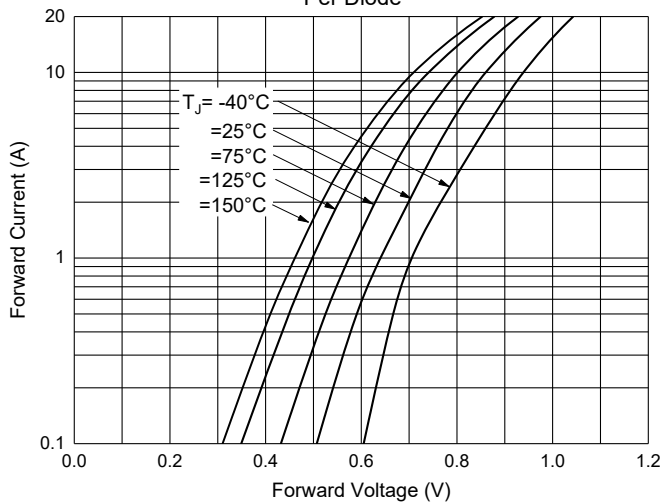


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

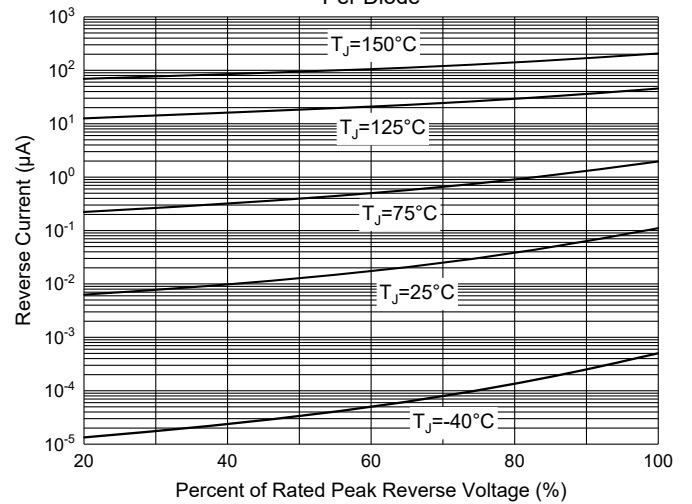
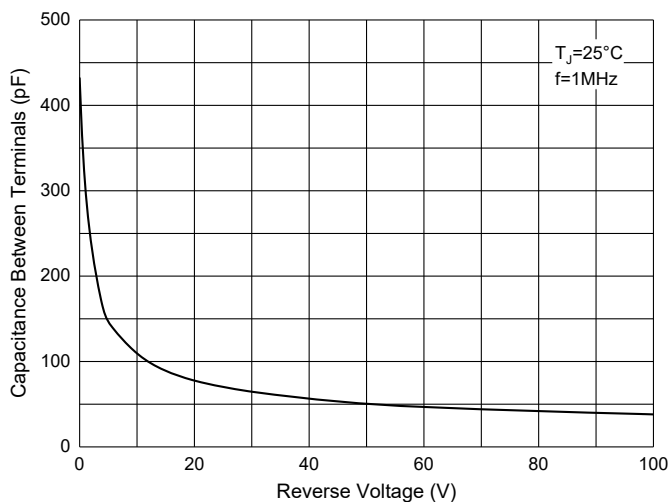


Fig. 5 - Typical Capacitance Characteristics Per Diode



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 800pcs/Reel
Part Number-BP	Tube: 5Kpcs/Ctn

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