

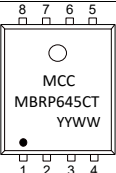
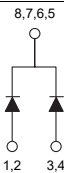
Features

- High Frequency Operation
- Guard Ring for Enhanced Ruggedness and Long Term Reliability
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free. "Green" Device (Note 2)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Fully Automotive Qualified to AEC-Q101

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	31.5	V
Average Rectified Forward Current	$I_{F(AV)}$	3 6	A
Per Diode Per Device			
Non-Repetitive Peak Surge Current(Per Diode) @8.3ms Half Sine Wave	I_{FSM}	80	A
Current Squared Time (Per Diode) @ $1ms \leq t \leq 8.3ms$	I^2t	26.6	A ² s

Internal Structure

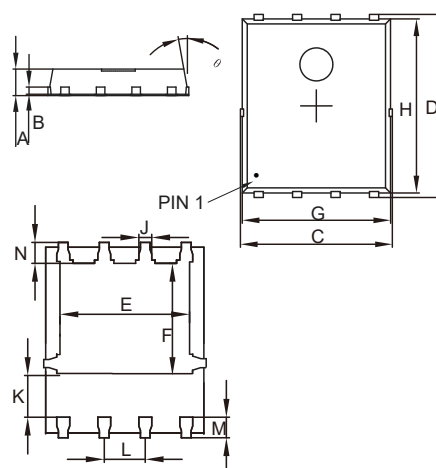
Pin	Description	Simplified Outline	Graphic Symbol
5~8	Cathode	 YYWW=Date Code	
1~4	Anode		

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

6 Amp Schottky Barrier Rectifier 45 Volts

DFN5060



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.031	0.047	0.80	1.20	TYP.
B	0.010		0.254		
C	0.193	0.222	4.90	5.64	
D	0.232	0.250	5.90	6.35	
E	0.148	0.167	3.75	4.25	
F	0.126	0.154	3.20	3.92	
G	0.189	0.213	4.80	5.40	
H	0.222	0.239	5.65	6.06	
K	0.045	0.059	1.15	1.50	
J	0.012	0.020	0.30	0.50	
L	0.046	0.054	1.17	1.37	
M	0.012	0.028	0.30	0.71	
N	0.016	0.028	0.40	0.71	

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
$R_{th(J-L)}$	Thermal Resistance from Junction to Case ^{Note 1}			3.5		°C /W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient ^{Note 1}			55		°C /W

Note:

1. Mounted on P.C.B. with 1in² copper pad areas.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=3A; T_J=25^{\circ}C$ $I_F=3A; T_J=125^{\circ}C$		0.51 0.45	0.60 0.50	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			0.1 100	mA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		170		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

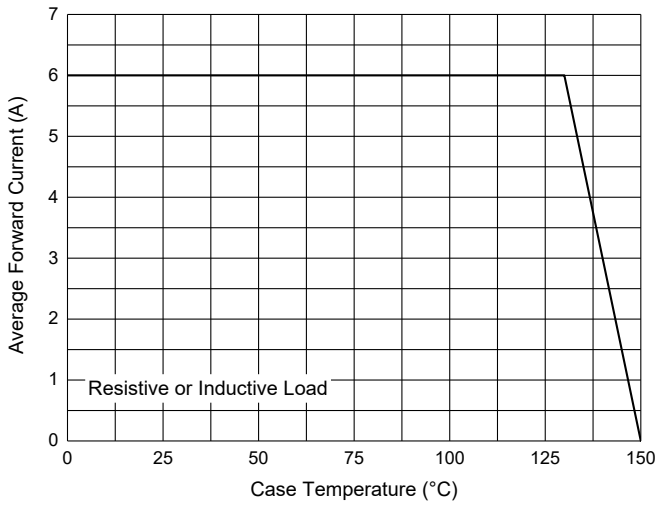


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

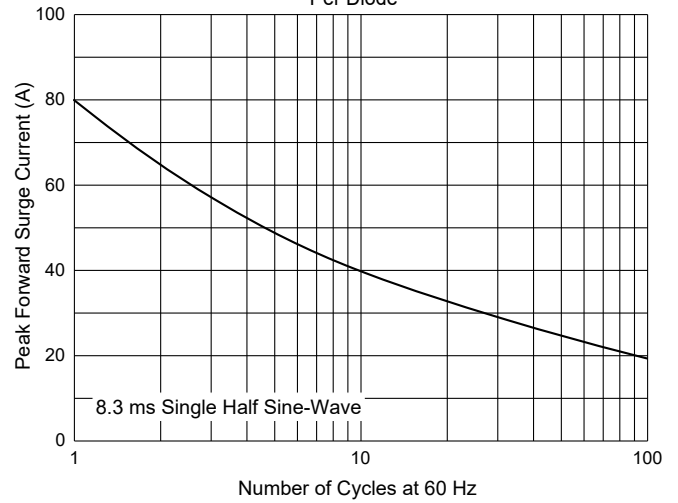


Fig. 3 - Typical Forward Characteristics Per Diode

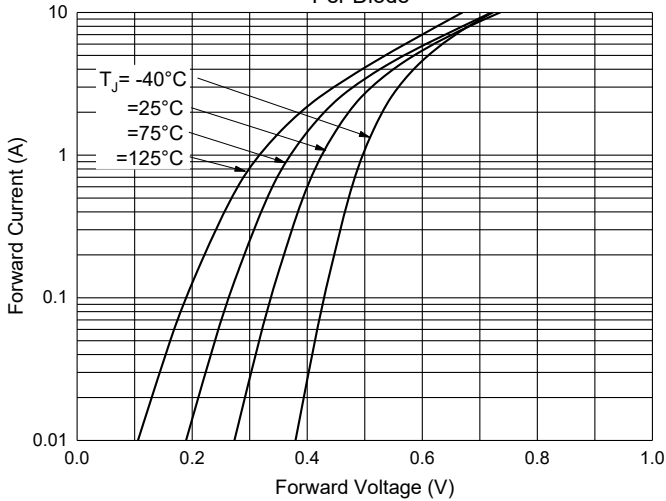


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

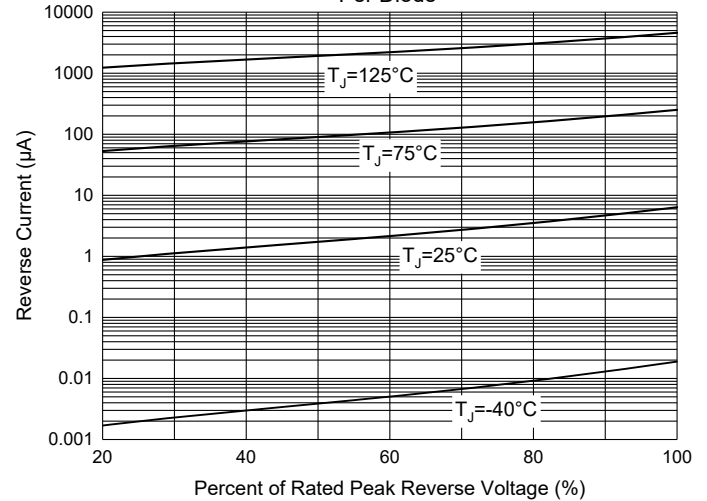
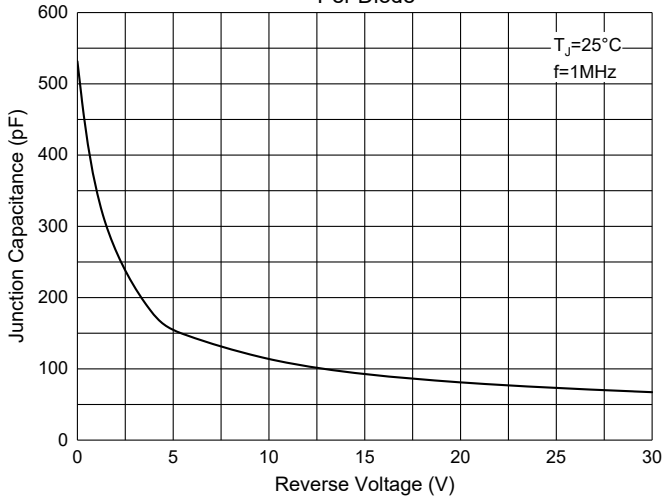


Fig. 5 - Typical Capacitance Characteristics Per Diode



Ordering Information

Device	Packing
MBRP645CTQ-TP	Tape&Reel:5Kpcs/Reel

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