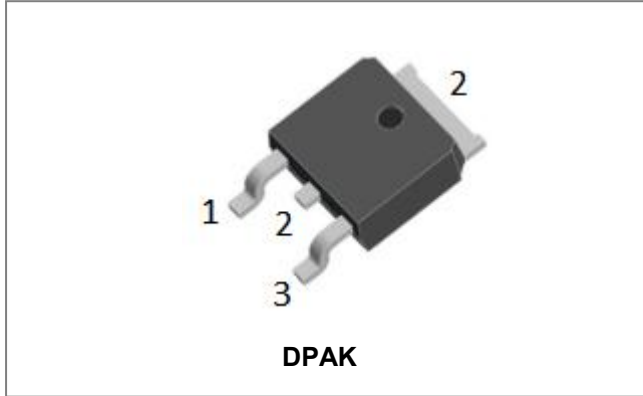


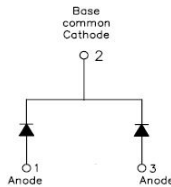
MBRD1545CT SCHOTTKY RECTIFIER



Features

- 150°C T_J operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery charging

Maximum Ratings@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _R RM V _R WM V _R	-	45	V
Average Rectified Forward Current	I _F (AV)	50% duty cycle @T _C =105°C, rectangular wave form	7.5(Peg Leg) 15(Peg Device)	A
Peak One Cycle Non-Repetitive Surge Current(peg leg)	I _{FSM}	8.3 ms, half Sine pulse	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Peg Leg) *	V _{F1}	@ 7.5A, Pulse, T _J = 25 °C	0.49	0.65	V
	V _{F2}	@ 7.5A, Pulse, T _J = 125 °C	0.42	0.60	V
Reverse Current (Peg Leg) *	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.03	1.0	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	15	20	mA
Junction Capacitance(Peg Leg)	C _T	@V _R = 5V, T _C = 25 °C, f _{SIG} = 1MHz	300	400	pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to + 150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case(Peg Leg)	$R_{\theta\text{JC}}$	-	3.5	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

Ratings and Characteristics Curves

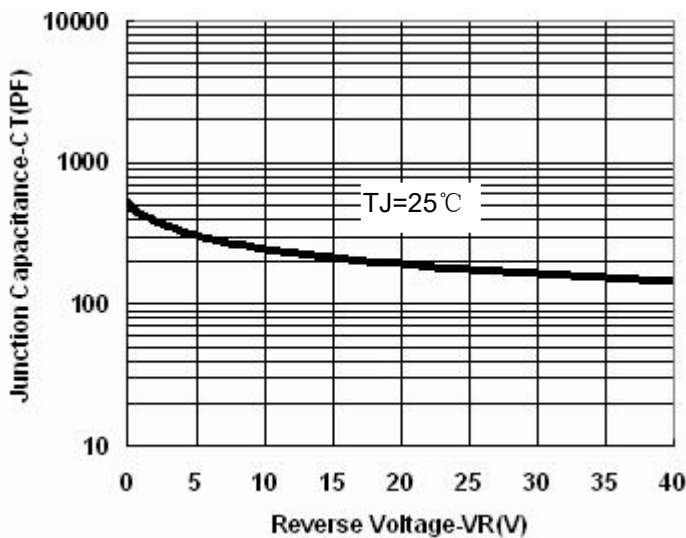


Fig.1-Typical Junction Capacitance

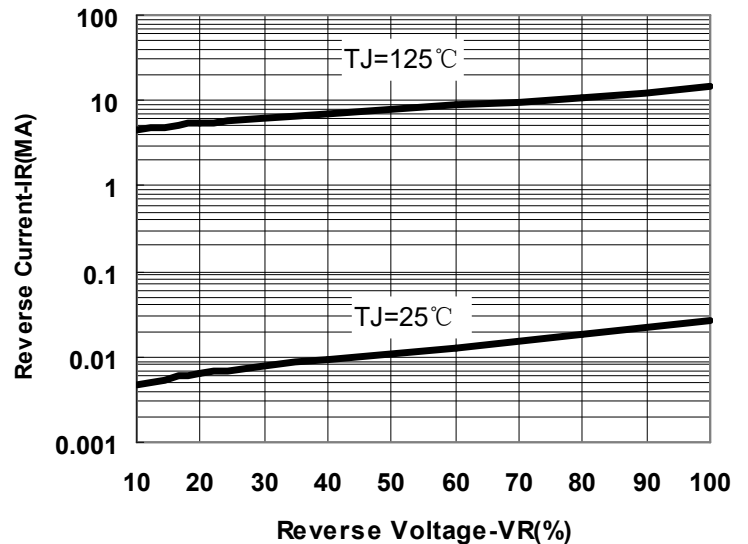


Fig.2-Typical Reverse Characteristics

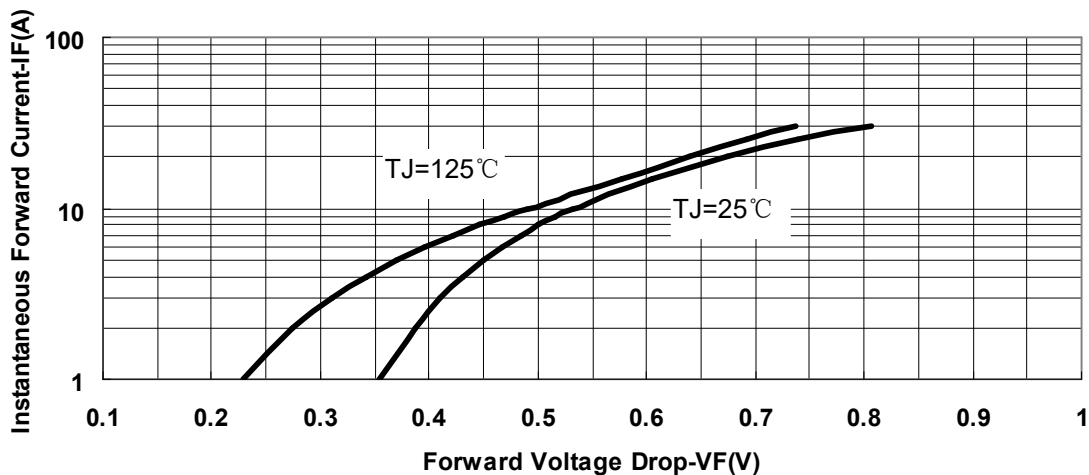
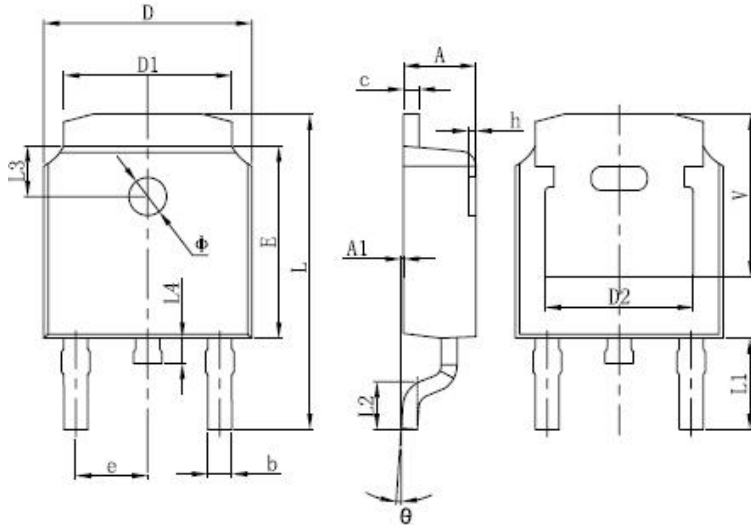


Fig.3-Typical Instantaneous Forward Voltage Characteristics

Mechanical Dimensions DPAK


Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	2.18	-	2.39
A1	-	-	0.13
b	0.64	-	0.89
c	0.46	-	0.89
D	6.35	-	6.73
D1	4.95	-	5.46
D2	4.32	-	-
E	5.97	6.1	6.22
e	2.29BSC		
L	9.4	-	10.41
L1	2.90 REF.		
L2	1.4	1.52	1.78
L3	1.60 REF.		
L4	-	-	1.02
Φ	1.1	-	1.3
Θ	0°	-	10°
V	5.21	-	-

Ordering Information

Device	Package	Shipping
MBRD1545CT	DPAK (Pb-Free)	2500pcs / reel
MBRD1545CTTR	DPAK (Pb-Free)	2500pcs / reel

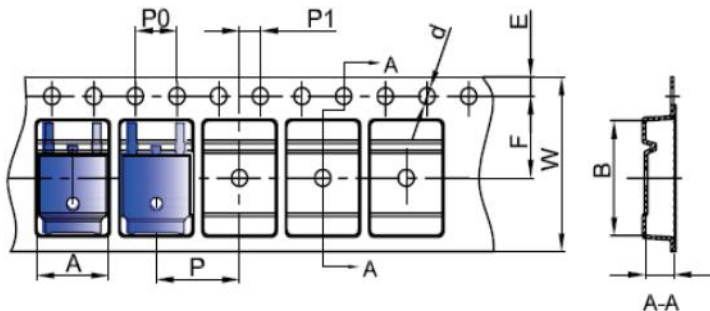
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel Packaging specification.

Marking Diagram


Where XXXXX is YYWWL

MBR = Device Type
 D = Package type
 15 = Forward Current (15A)
 45 = Reverse Voltage (45V)
 CT = Configuration
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification DPAK


SYMBOL	Millimeters	
	Min.	Max.
A	6.80	7.00
B	10.40	10.60
C	2.60	2.80
d	Φ1.45	Φ1.65
E	1.65	1.85
F	7.40	7.60
P0	3.90	4.10
P	7.90	8.10
P1	1.90	2.10
W	15.90	16.30

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