

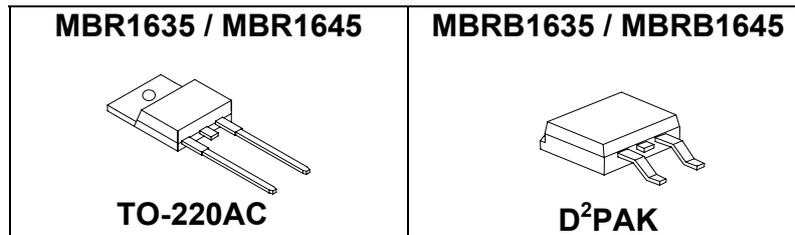
MBR1635/MBRB1635/MBR1645/MBRB1645
SCHOTTKY RECTIFIER

Applications:

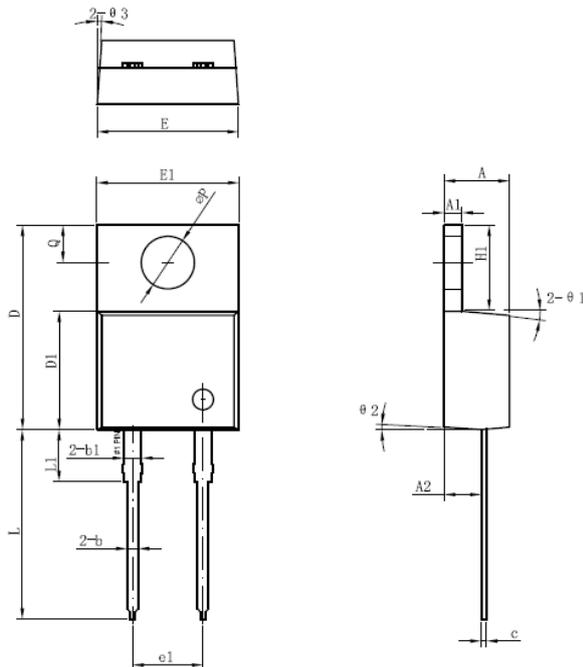
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 150 °C T_J operation
- 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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

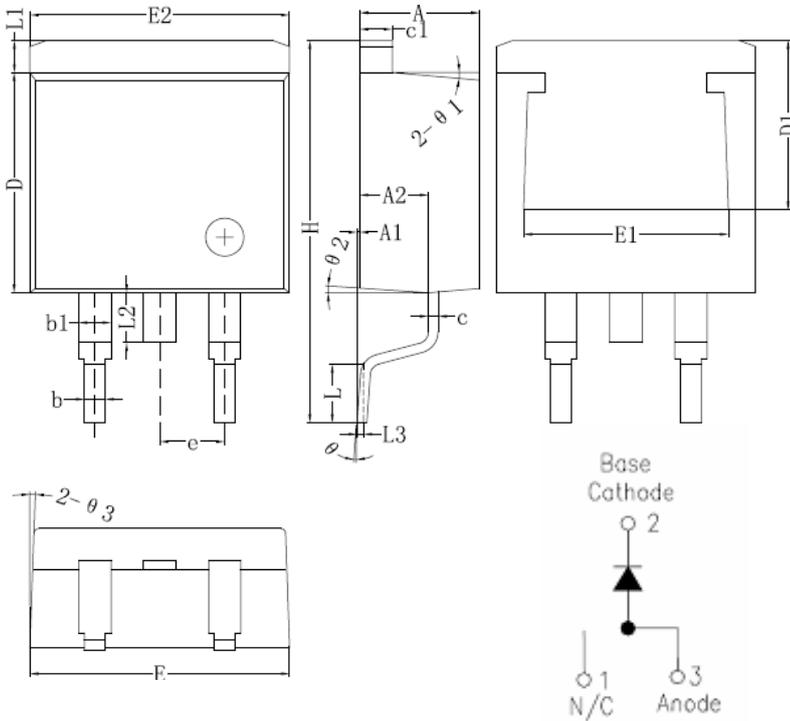


Mechanical Dimensions: In mm



TO-220AC

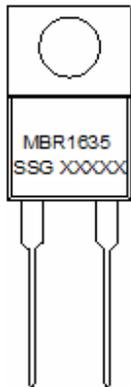
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.64	14.94	15.24
D1	8.55	8.07	8.85
E	10.01	10.16	10.31
E1	9.98	10.18	10.38
e1		5.08	
H1	6.04	6.24	6.44
L	13.00	13.86	14.08
L1		3.80	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
θ1		5°	
θ2		4°	
θ3		4°	



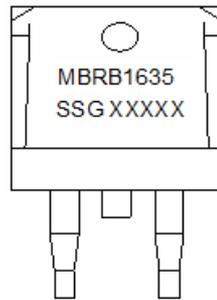
Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D²PAK

Marking Diagram:



MBR1635



MBRB1635

Where XXXXX is YYWWL

MBR = Device Type
B = Package type
16 = Forward Current (16A)
35 = Reverse Voltage (35V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR1635	TO-220AC (Pb-Free)	50pcs / tube
MBRB1635	D ² PAK (Pb-Free)	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	35(MBR1635, MBRB1635) 45(MBR1645, MBRB1645)	V
Average Forward Current	$I_{F(AV)}$	@ $T_C = 80^\circ\text{C}$ (Rated V_R)	16	A
Peak One Cycle Non-Repetitive Surge Current (Per leg)	I_{FSM}	8.3 ms, half Sine pulse	150	A
Peak Repetitive Reverse Surge Current	I_{RRM}	2.0 μsec 1.0KHz	1.0	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop(Per leg)*	V _{F1}	@ 16A, Pulse, T _J = 25 °C	0.63	V
	V _{F2}	@ 16A, Pulse, T _J = 125 °C	0.57	V
Reverse Current (Per leg)*	I _{R1}	@V _R = rated V _R Pulse T _J = 25 °C	1.0	mA
	I _{R2}	@V _R = rated V _R , Pulse T _J = 125 °C	40	mA
Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	1400	pF
Voltage Rate of Change	dv/dt	-	10,00	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case	R _{θJC}	DC operation	1.5	°C/W
Typical Thermal Resistance Case to Heat Sink	R _{θCS}	Mounting surface, smooth and greased	0.50	°C/W
Approximate Weight	wt	-	1.6	g
Case Style	TO-220AC/D ² PAK			

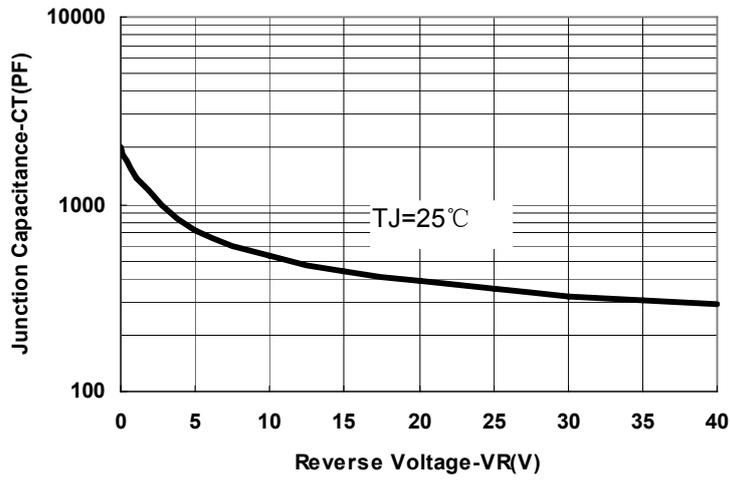


Fig.1-Typical Junction Capacitance

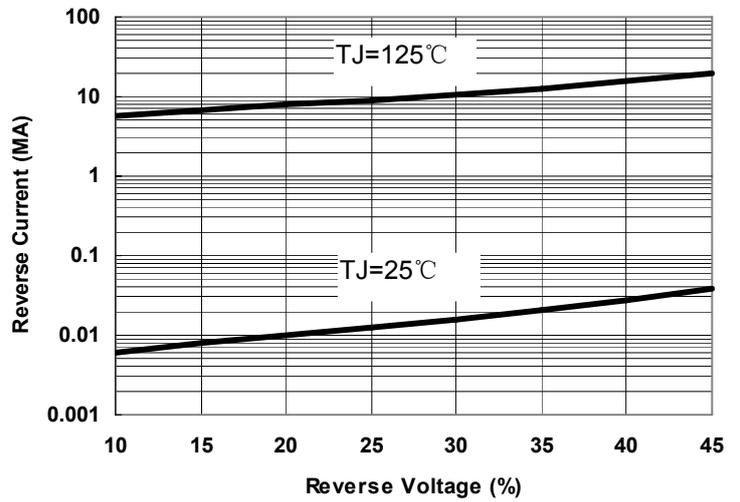


Fig.2-Typical Reverse Characteristics

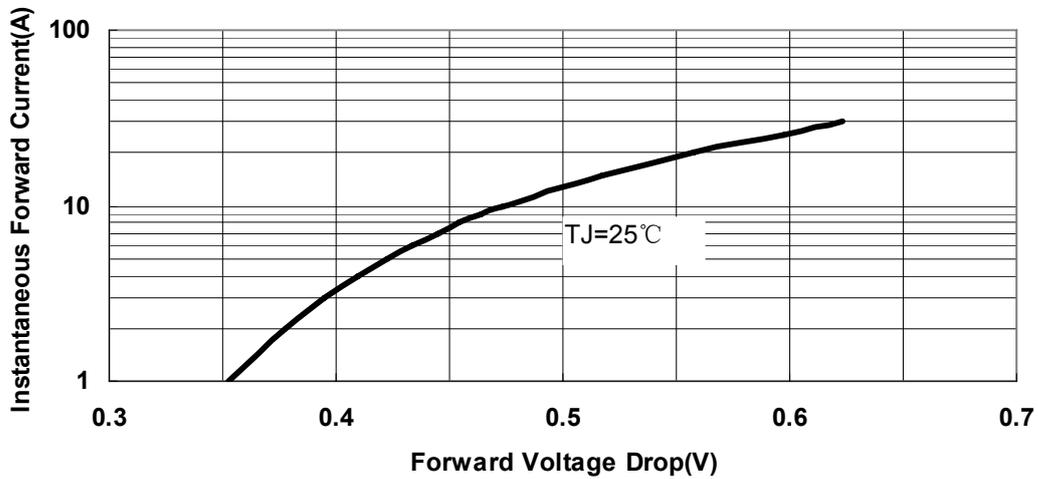


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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