

MBR735/MBR745/MBRB735/MBRB745
SCHOTTKY RECTIFIER

Applications:

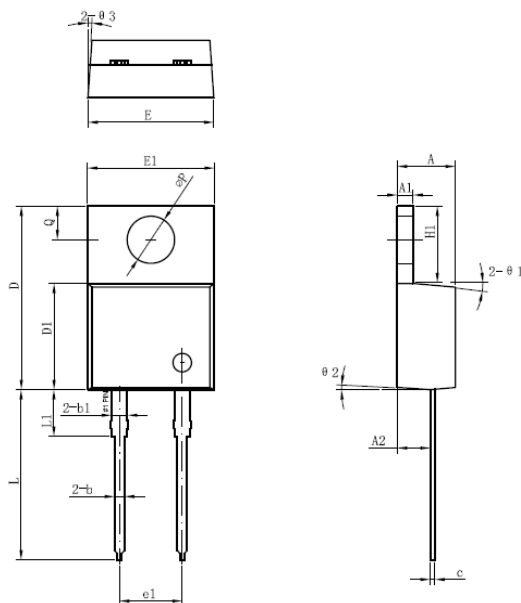
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

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

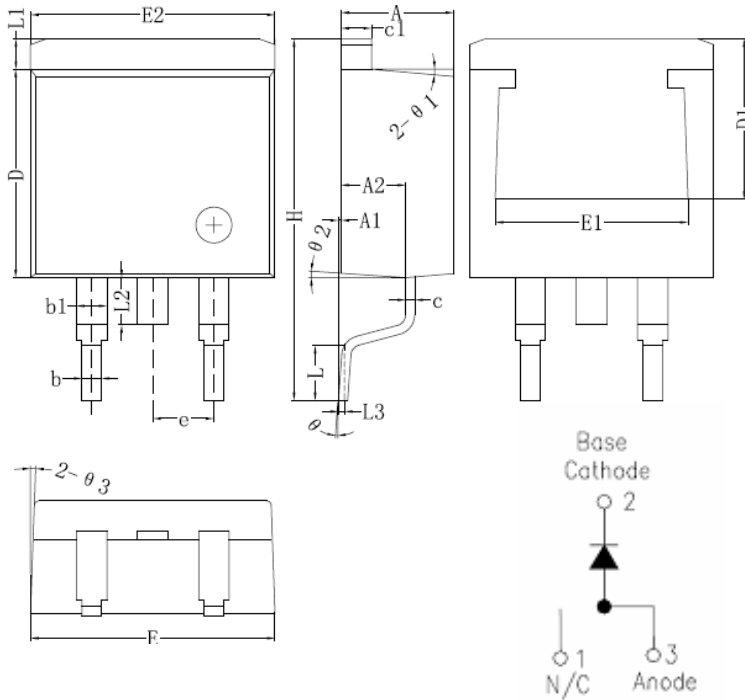


Mechanical Dimensions: In Inches / mm



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°	

TO-220AC



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°	

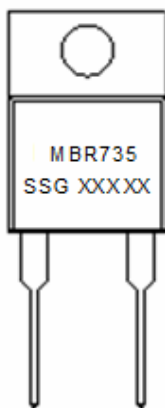
D²PAK



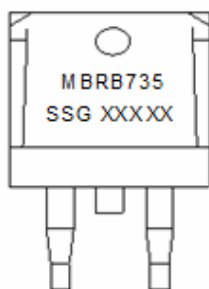
Technical Data
Data Sheet N0720, Rev. -

Green Products

Marking Diagram:



MBR735



MBRB735

Where XXXXX is YYWWL

- MBR = Device Type
- B = Package type
- 7 = Forward Current (7A)
- 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
MBR735	TO-220AC(Pb-Free)	50pcs/ tube
MBRB735	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(MBR.735) 45(MBR.745)	V
Max. Average Forward Current	$I_{F(AV)}$	@ $T_C=131^{\circ}C$ (Rated V_R)	7.5	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	150	A
Peak Repetitive Reverse Surge Current	I_{RRM}	2.0 μ sec 1.0KHz	1.0	A



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Electrical Characteristics:

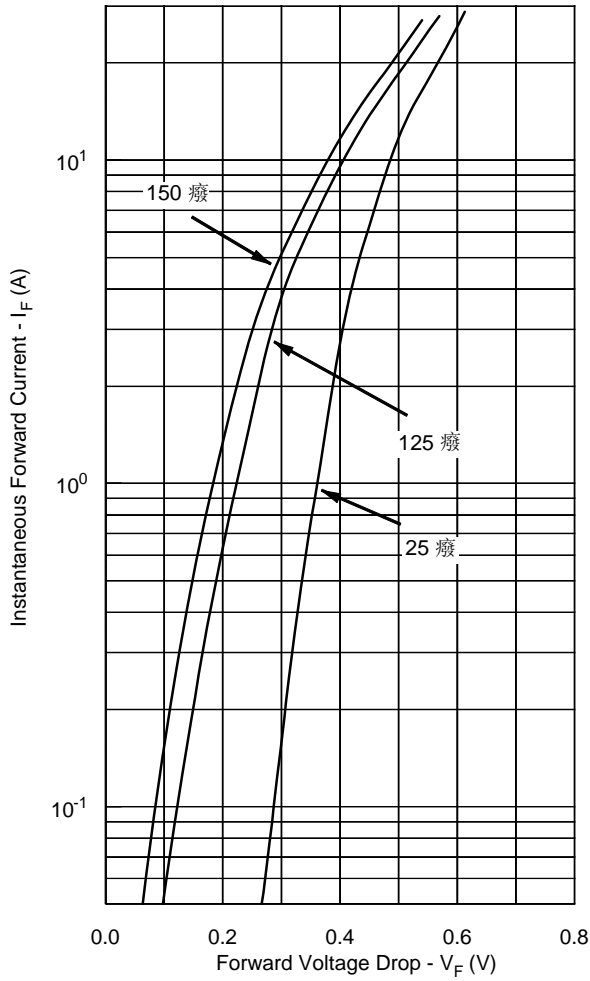
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V _{F1}	@ 15A, Pulse, T _J = 25 °C	0.84	V
	V _{F2}	@ 7.5A, Pulse, T _J = 125 °C	0.57	V
Max. Reverse Current (per leg) *	I _{R1}	@V _R = rated V _R Pulse T _J = 25 °C	0.1	mA
	I _{R2}	@V _R = rated V _R , Pulse T _J = 125 °C	15.0	mA
Max. Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	400	pF
Typical Series Inductance (per leg)	L _S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,00	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

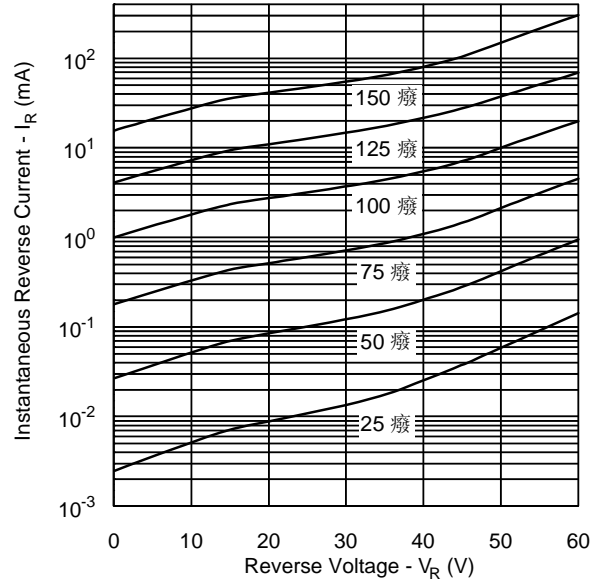
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +150	°C
Max. Storage Temperature	T _{stg}	-	-65 to +175	°C
Maximum Thermal Resistance Junction to Case	R _{θJC}	DC operation	3.0	°C/W
Typical Thermal Resistance Case to Heat Sink	R _{θCS}	Mounting surface, smooth and greased (only for TO-220)	0.50	°C/W
Approximate Weight	wt	-	1.6/1.85	g
Case Style	TO-220AC/D ² PAK			

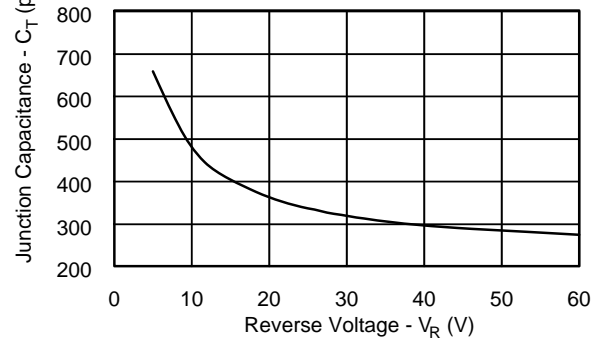
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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