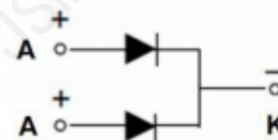


Features:

- ◆ Common Cathode Structure
- ◆ Low Power Loss and High Efficiency
- ◆ Low Forward Voltage Drop
- ◆ High Surge Capability

Application:

- ◆ High Frequency Switch
- ◆ Free Wheeling, and Polarity Protection Applications



Absolute Maximum Ratings (T_c=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage	100	V
V _R	Maximum DC Reverse Voltage	100	V
I _{F(AV)}	Average Rectified Forward Current, T _c =120°C	15(Per Leg) 30(Per Device)	A
I _{FSM}	Peak Forward Surge Current, 8.3ms Half Sine wave	250	A
T _j	Operating Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C

Thermal Characteristics (T_c=25°C unless otherwise noted)

Symbol	Parameter	Max	Unit
R _{θJC}	Thermal Resistance, Junction to Case Per Leg	1.4	°C /W
R _{θJA}	Thermal Resistance, Junction to Ambient Per Leg	59	°C /W

Electrical Characteristics (T_c=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min	Max	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage	I _R =100μA	100		V
I _R	Reverse Current	V _R =100V T _c =25°C V _R =100V T _c =125°C		0.1 5	mA
V _F	Forward Voltage	I _F =15A T _c =25°C I _F =15A T _c =125°C I _F =30A T _c =25°C I _F =30A T _c =125°C		0.88 0.78 1.05 0.95	V

Typical Performance Characteristics

Figure 1. Forward Current Characteristics

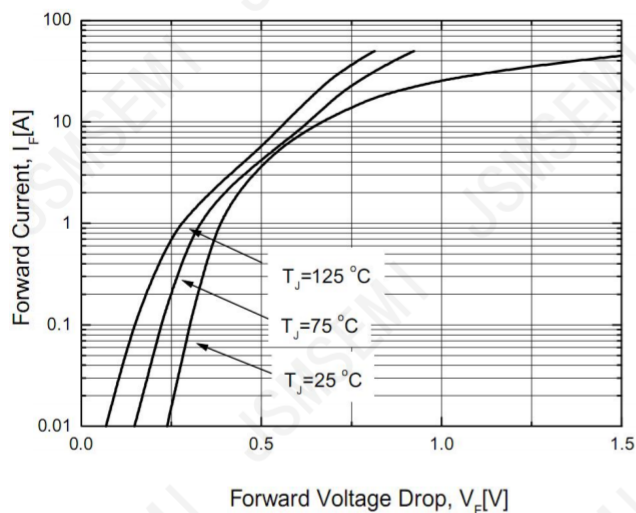


Figure 2. Reverse Leakage Current

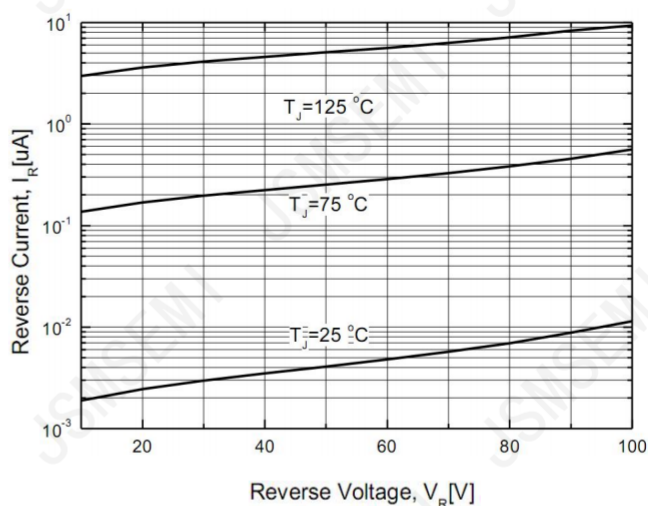


Figure 3. Junction Capacitance

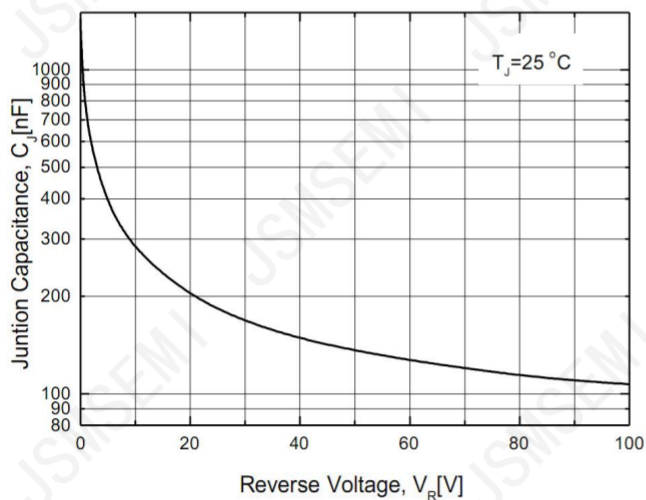
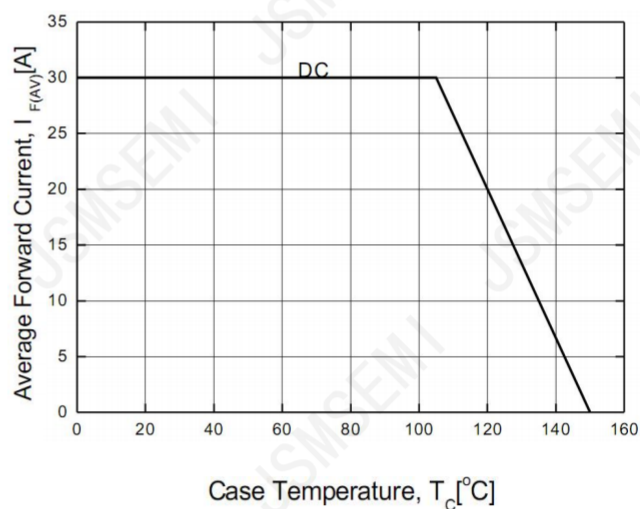


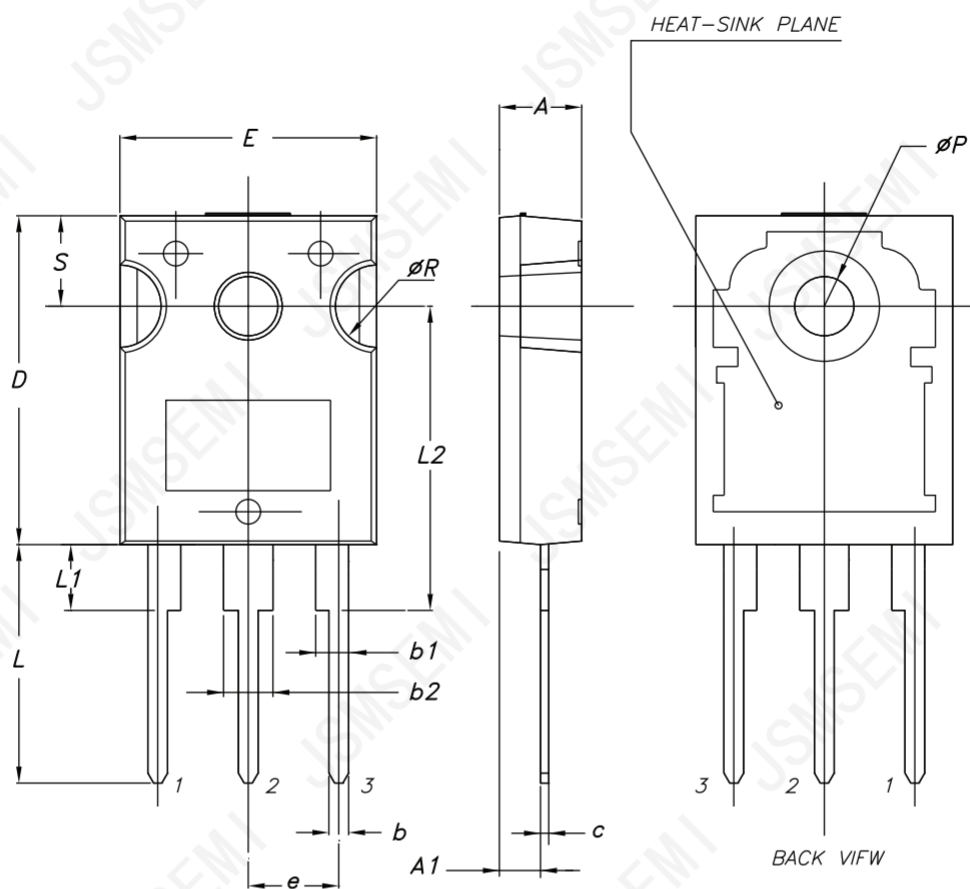
Figure 4. Power Derating



Ordering Information

Order number	Package	Marking	Operation Temperature Range	MSL Grade	Ship, Quantity	Green
MBR30100PT	TO-247S	MBR30100PT	-55 to 150°C	3	TUBE,450	Rohs

TO-247S Package Dimensions



Dim.	mm.		
	Min.	Typ.	Max.
A	4.85		5.15
A1	2.20		2.60
b	1.0		1.40
b1	2.0		2.40
b2	3.0		3.40
c	0.40		0.80
D	19.85		20.15
E	15.45		15.75
e	5.30	5.45	5.60
L	14.20		14.80
L1	3.70		4.30
L2		18.50	
ØP	3.55		3.65
ØR	4.50		5.50
S	5.30	5.50	5.70

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER' S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements diferent from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or s ervice. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com