



Key Parameters

V_{RRM}	= 4000V
$I_{F(AV)}$	= 450A
I_{FSM}	= 17500A
$V_{F(TO)}$	= 0.85V
r_F	= 0.55m Ω

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium nitride ceramic isolated metal baseplate
- Pressure contacts technology for high reliability
- UL Recognized, file no. E505556

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Field supply for DC motors
- Battery Chargers
- UPS

Ordering Information

MS	DD	450	K	40
Fixed code	DD- Diode- Diode Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS DD450K40 : 4000V V_{RRM} , Diode-Diode Module				

Prepared by : ABA

Date of Publication : 25.03.2015

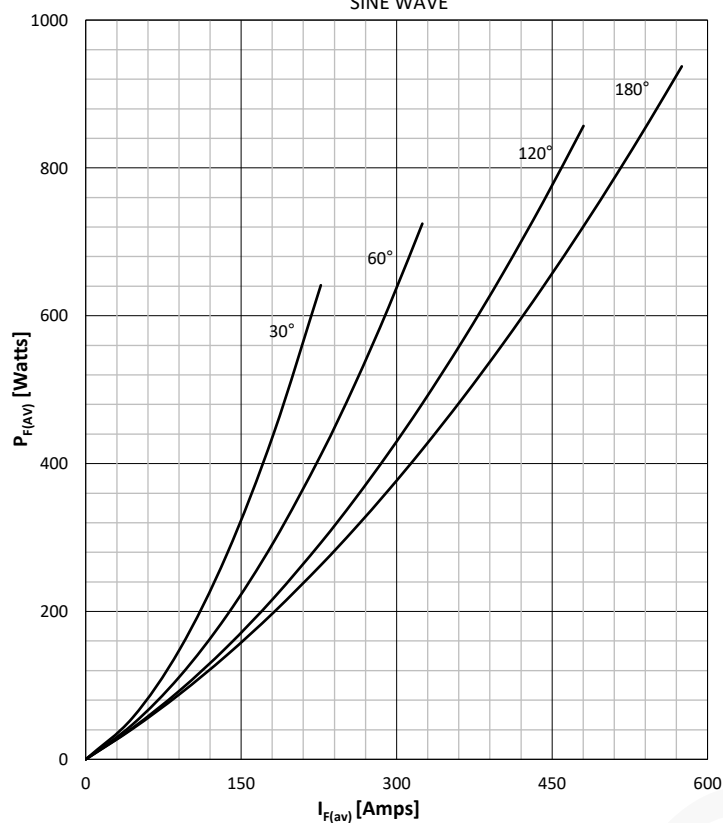
Approved by : RBS

Revision : 3

Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	3200 - 4000	V
V _{RSM}	Non-repetitive peak reverse voltage		150	3300 - 4100	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	150	40	mA
CONDUCTING					
I _{F (AV)}	Mean forward current	180° sin ,50 Hz, T _c = 88°C 180° sin ,50 Hz, T _c = 107°C		575 450	A
I _{FRMS}	RMS current	T _c = 88°C		903	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	17500	A
			150	15050	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	1531 x 10 ³	A ² s
			150	1132 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 1800A	150	1.90	V
V _{F(TO)}	Threshold voltage		150	0.85	V
r _F	Forward slope resistance		150	0.55	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, per arm per module		0.0650 0.0325	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, per arm per module		0.02 0.01	°C/W
T _j	Max. junction temperature			150	°C
T _{stg}	Storage temperature			-40 150	°C
V _{ISOL}	Insulation test voltage, RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			12 ± 10%	Nm
W	Weight (Approx.)			1450	gm
	File No.			E505556	
Prepared by : ABA Date of Publication : 25.03.2015 Approved by : RBS Revision : 3					

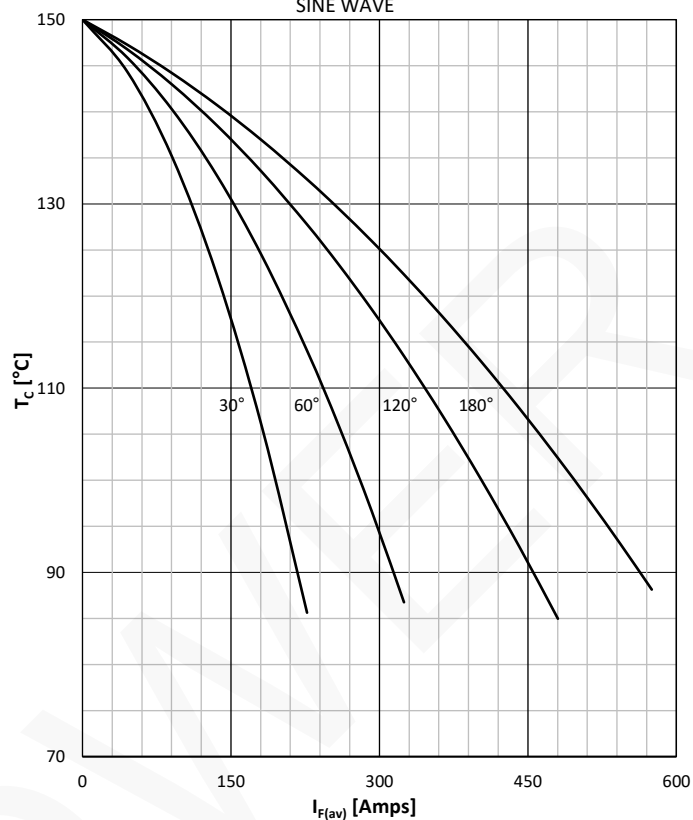
DISSIPATION CHARACTERISTICS

SINE WAVE



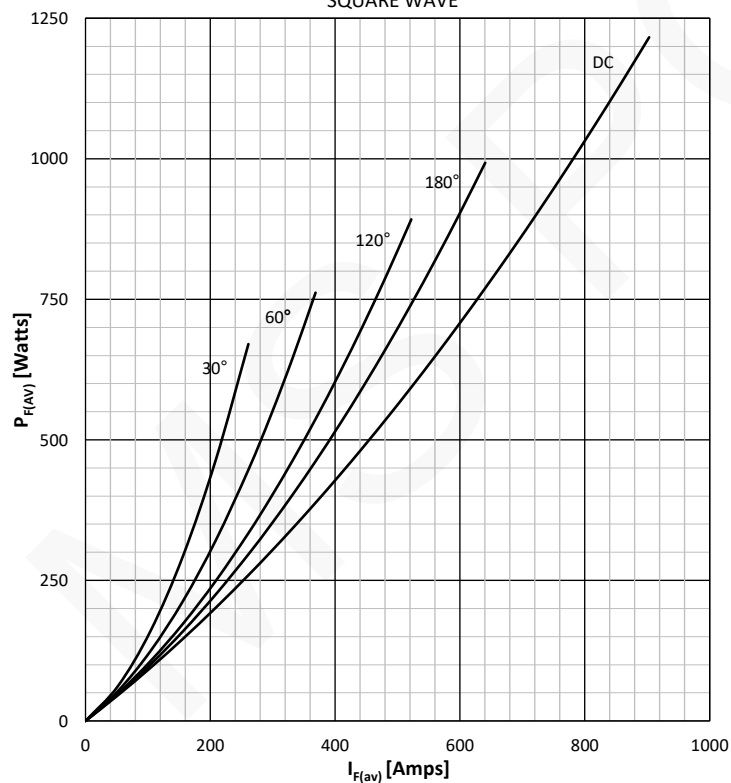
FORWARD CURRENT DERATING CURVE

SINE WAVE



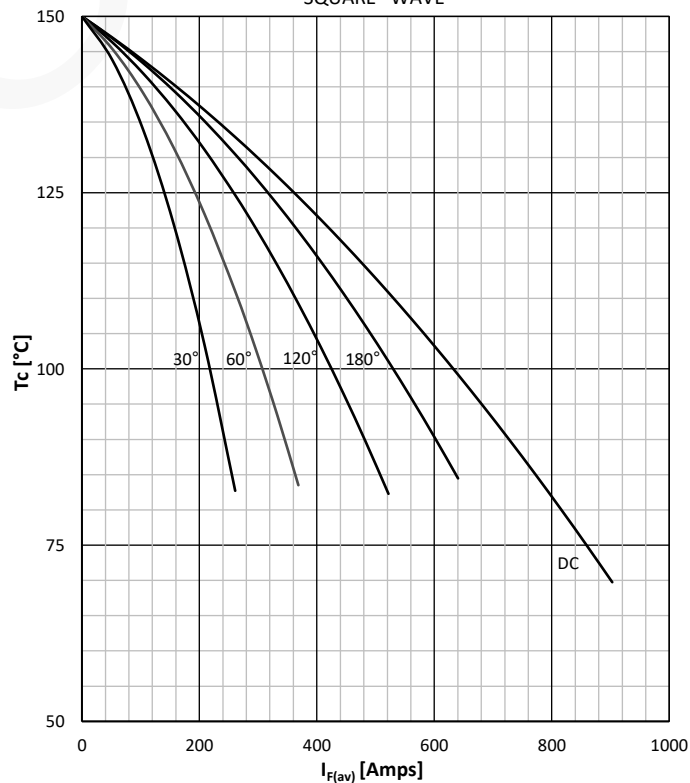
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



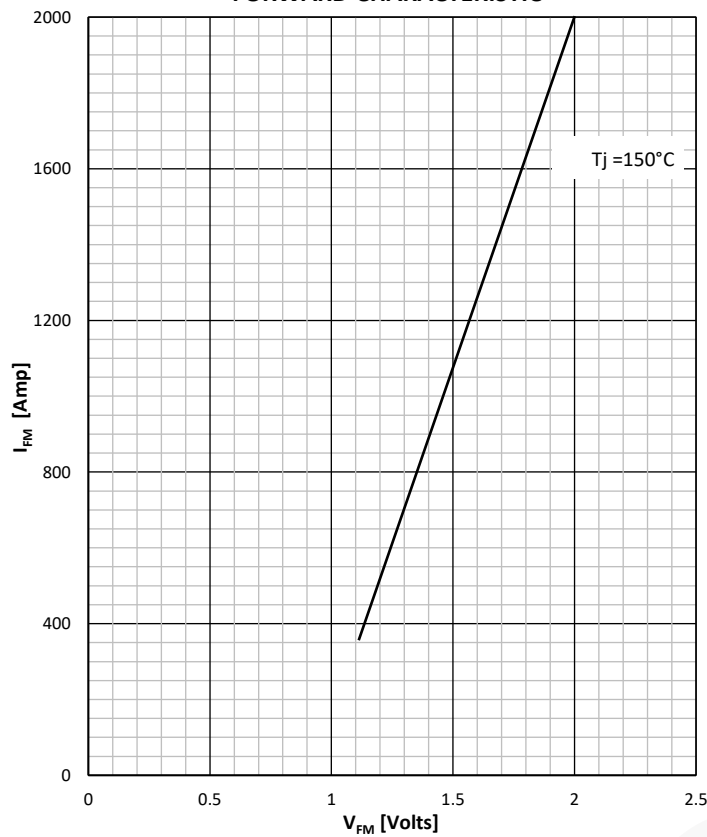
Prepared by : ABA

Date of Publication : 25.03.2015

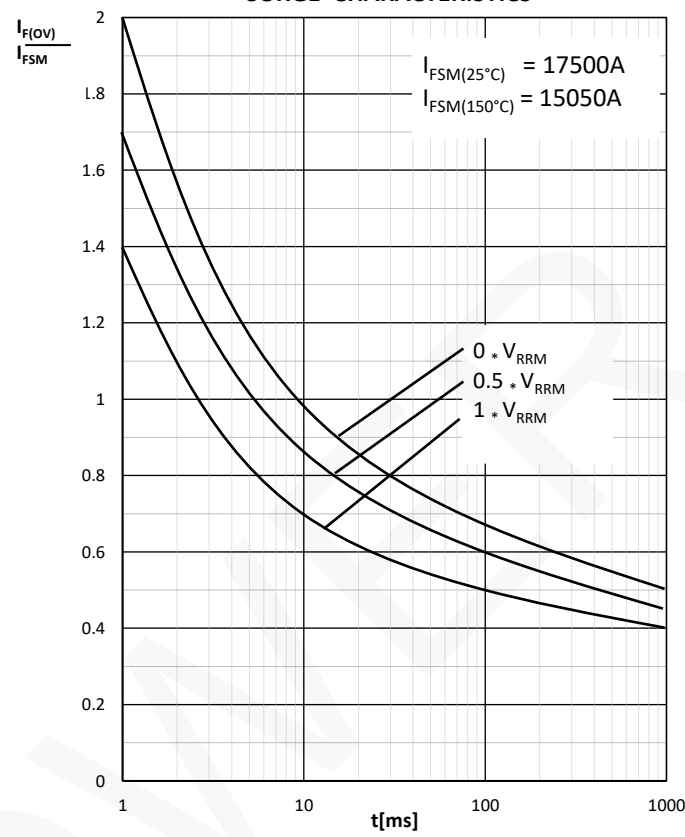
Approved by : RBS

Revision : 3

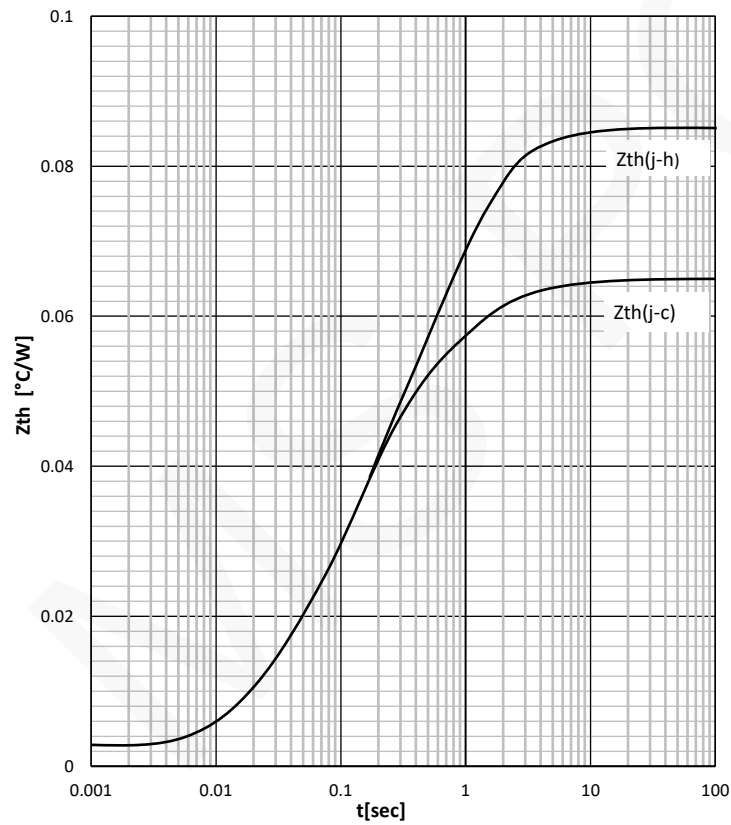
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

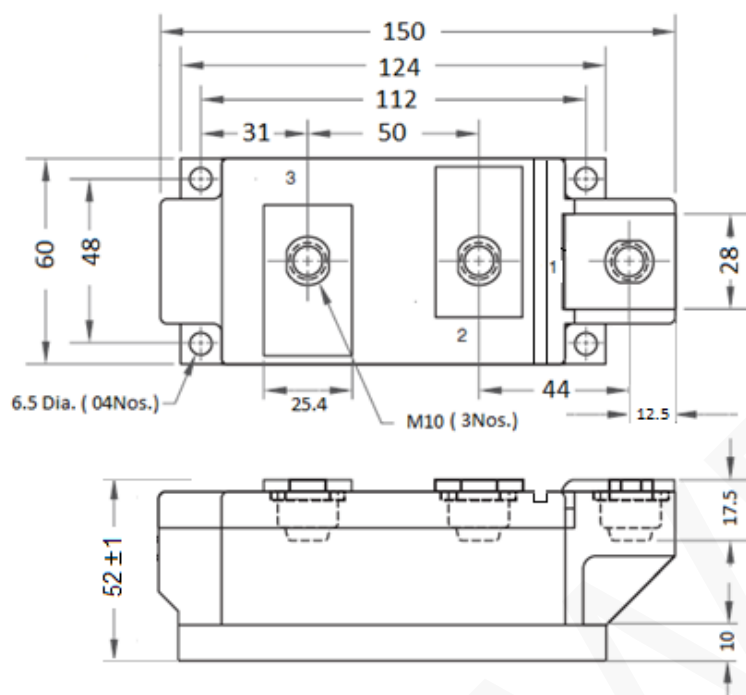


TRANSIENT THERMAL IMPEDANCE

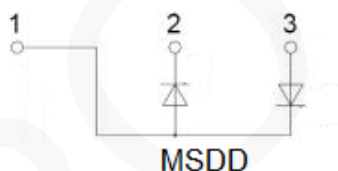


Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 3

Outline



Note : All dimensions are in mm.
Tolerance : $\pm 0.5\text{mm}$



MS Power GmbH

Mergenthalerallee 79-81
65760 Eschborn, Germany
Web: www.mspowergroup.com
Mail: info@mspowergroup.de

Sales & Enquiry:

sales@mspowergroup.de

Technical Support:

solution@mspowergroup.de

After sales Service:

service@mspowergroup.de

Phone: +49 (0) 6196/7768 666

Fax: +49 (0) 6196/7757 888



Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 3

Terms & Conditions of usage :

The data contained in this product datasheet is exclusively Intended for technically trained staff. You and your technical departments will have to evaluate the suitability of the product for the intended application and the completeness of the product data with respect to such application. This product datasheet is describing the characteristics of this product for which a warranty is granted. Any such warranty is granted exclusively pursuant the terms and conditions of the supply agreement. There will be no guarantee of any kind for the product and its characteristics. The information in the valid application-and assembly notes of the device must be considered.

Should you require product information in excess of the data given in this product datasheet or which concerns the specific application of our product, please contact the sales office, which is responsible for you (see www.mspowergroup.com). For those that are specifically interested we may provide application notes.

Due to technical requirements our product may contain dangerous substances. For information on the types in question please contact the sales office, which is responsible for you.

Should you intend to use the Product in aviation applications, in health or live endangering or life support applications, please notify. Please note, that for any such applications we urgently recommend

- to perform joint Risk and Quality Assessments;
- the conclusion of Quality Agreements;
- to establish joint measures of an ongoing product survey, and that we may make delivery depended on the realization of any such measures.

If and to the extent necessary, please forward equivalent notices to your customers.

Changes of this product datasheet are reserved.

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 3