MS DZ1280

Key Parameters

V_{RRM}	= 2200V
$I_{F(AV)}$	= 1280A
I_{FSM}	= 48000A
$V_{F(TO)}$	= 0.80V
r_F	= 0.100mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium nitride ceramic isolated metal base plate
- Pressure contacts technology for high reliability

Applications

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

Ordering Information

MS	DZ	1280	K	X X
Fixed code	DZ- Rectifier Diode Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS DZ1280K22 : 2200V V_{RRM}, Rectifier Diode Module				

Prepared by : ABA	Date of Publication : 10.2022
Approved by : RBS	Revision : 0

MS DZ1280

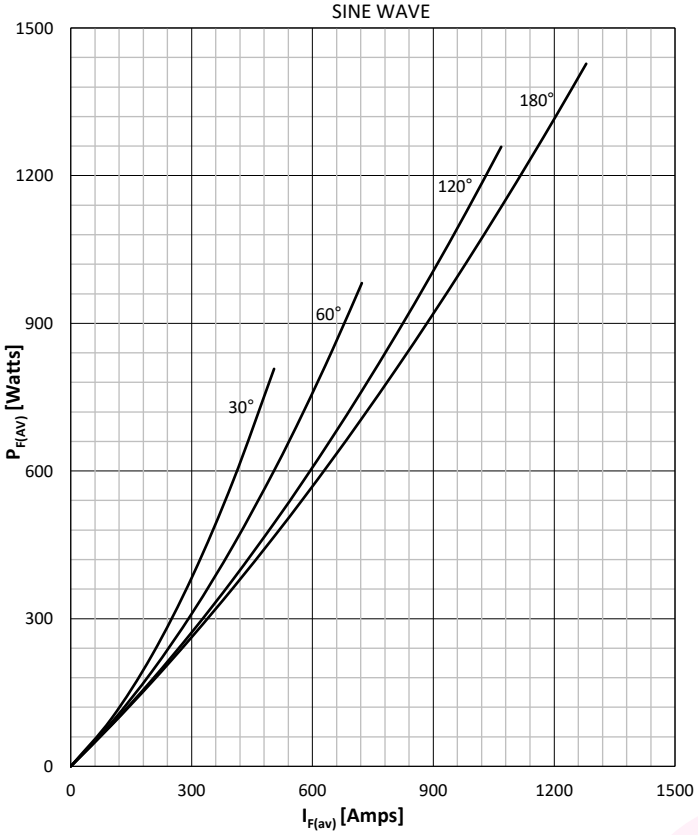
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		160	2000 - 2200	V
V_{RSM}	Non-repetitive peak reverse voltage		160	2100 - 2300	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	160	70	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin ,50 Hz, T_c=100°C		1280	A
I_{FRMS}	RMS current	T_c=100°C		2009	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	48000	A
			160	40000	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	11520 x 10^3	A^2s
			160	8000 x 10^3	A^2s
V_F	Forward voltage	On-state current = 3140A	25	1.30	V
$V_{F(TO)}$	Threshold voltage		160	0.80	V
r_F	Forward slope resistance		160	0.100	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, per module		0.042	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per module		0.010	°C/W
T_j	Max. junction temperature			160	°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			18 ± 10%	Nm
W	Weight (Approx.)			2000	gm

Prepared by : ABA	Date of Publication : 10.2022
Approved by : RBS	Revision : 0

MS DZ1280

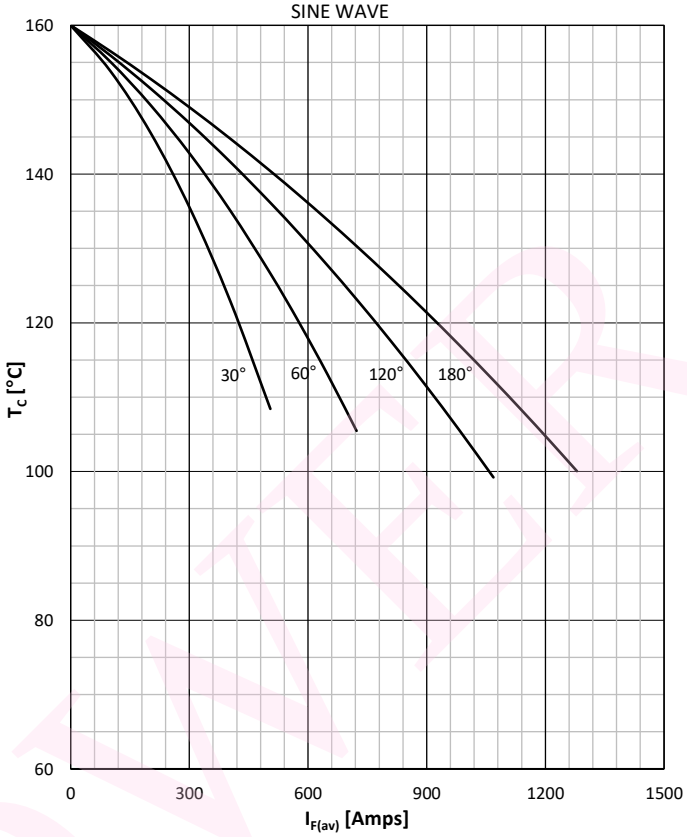
DISSIPATION CHARACTERISTICS

SINE WAVE



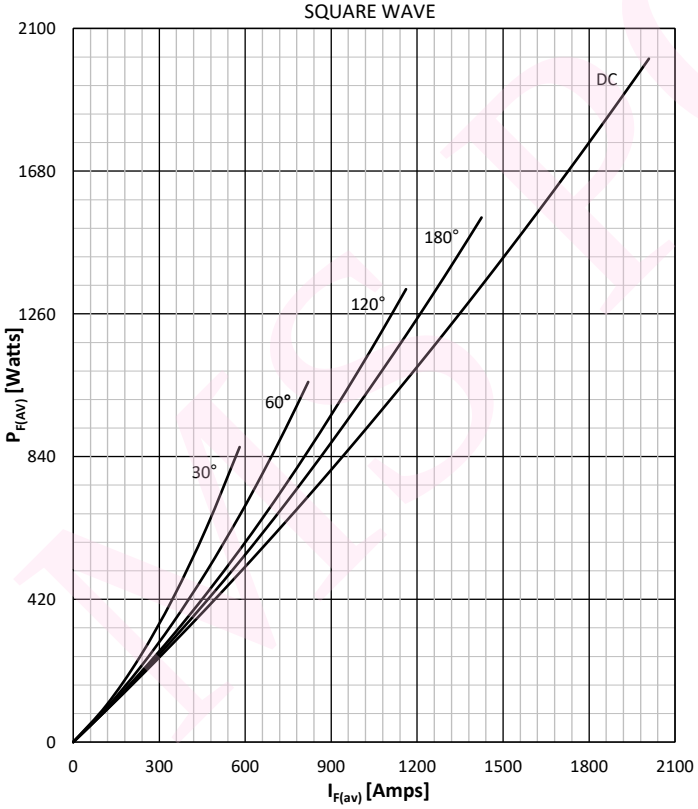
FORWARD CURRENT DERATING CURVE

SINE WAVE



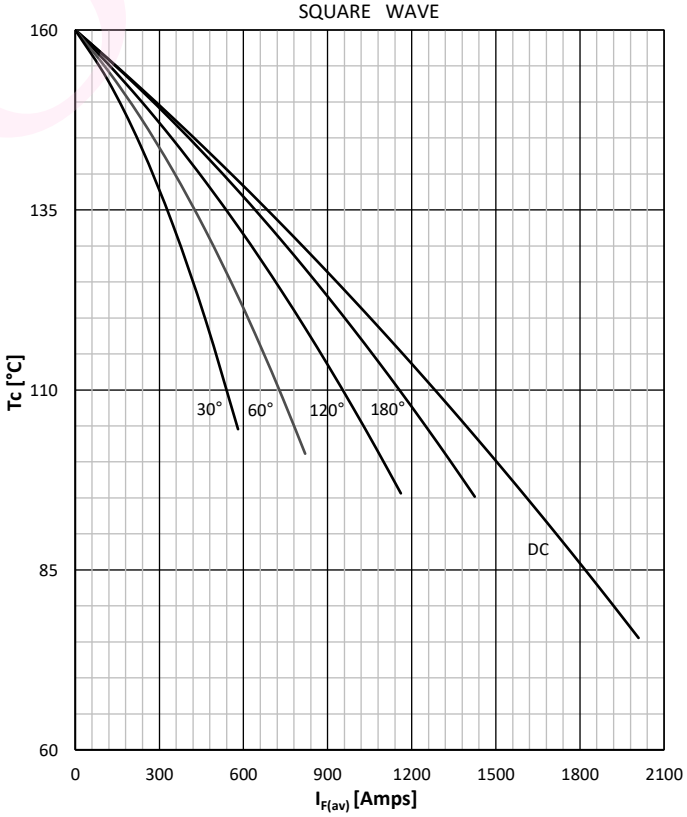
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

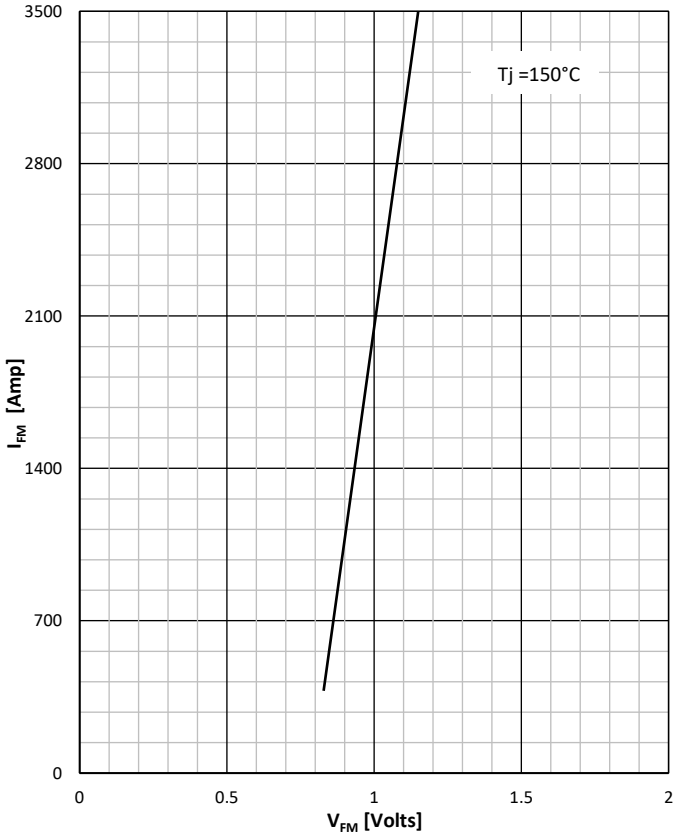
SQUARE WAVE



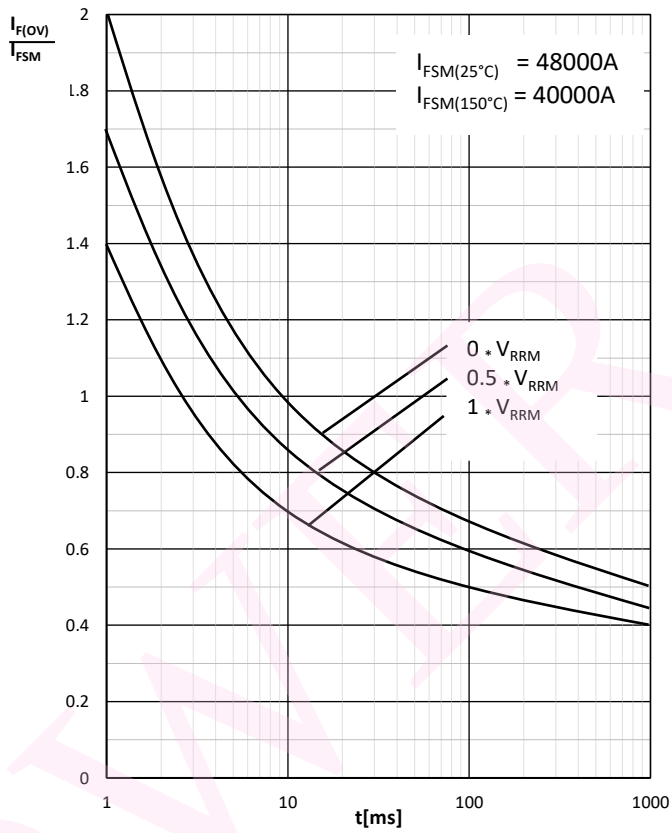
Prepared by : ABA	Date of Publication : 10.2022
Approved by : RBS	Revision : 0

MS DZ1280

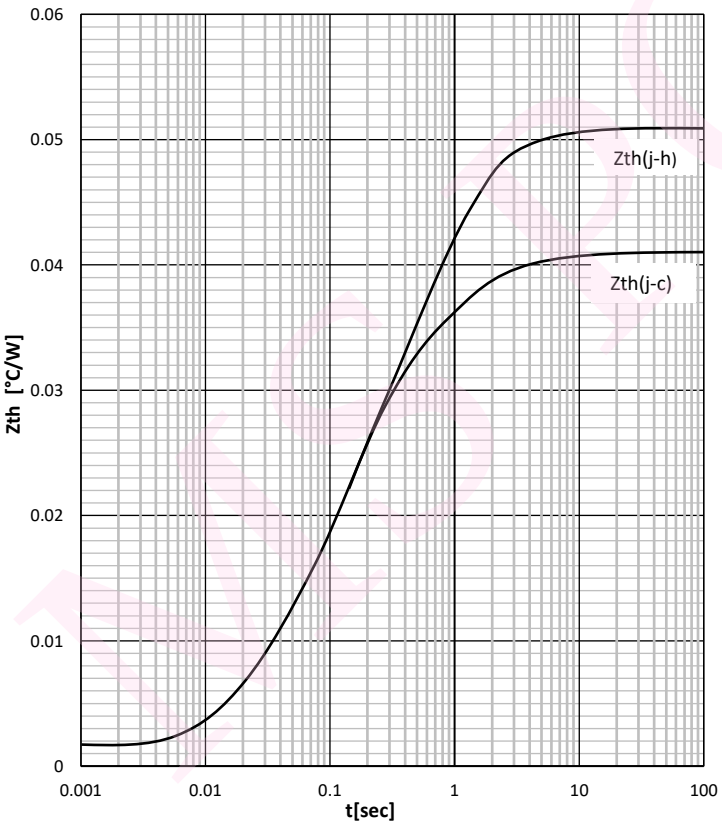
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

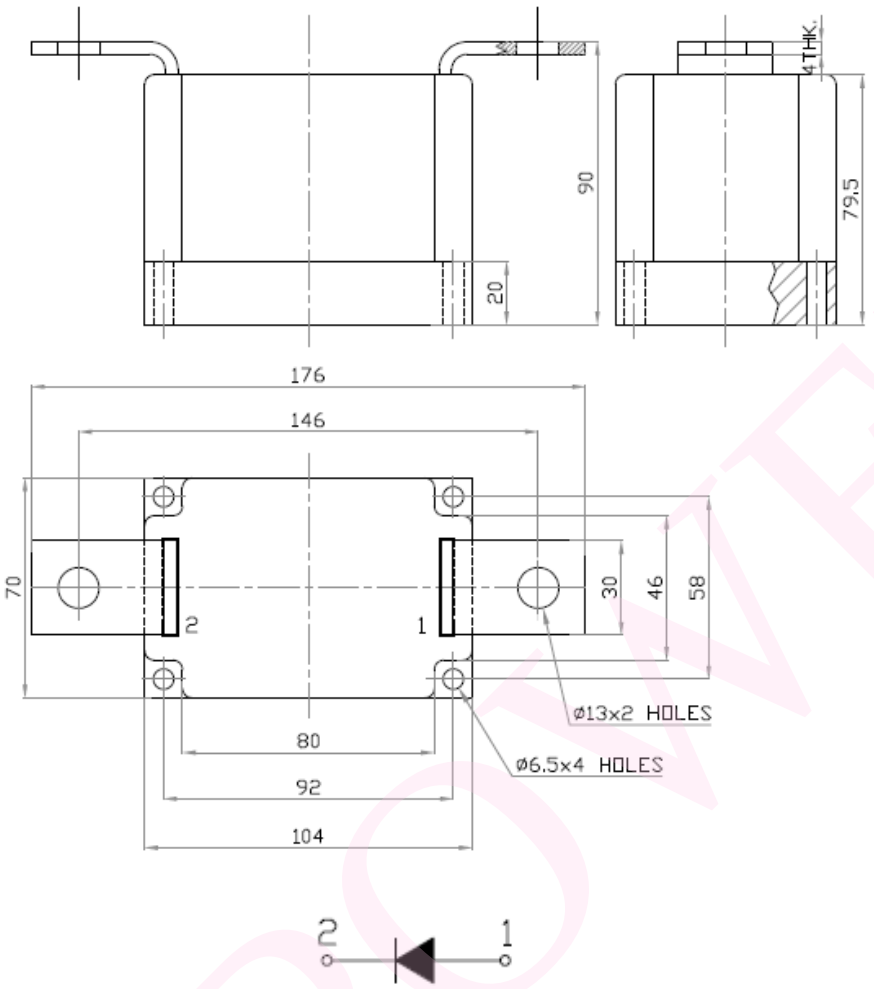


TRANSIENT THERMAL IMPEDANCE



Prepared by : ABA	Date of Publication : 10.2022
Approved by : RBS	Revision : 0

Outline:



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 : 10.2022
Approved by : RBS	Revision : 0

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 : 10.2022
Approved by : RBS	Revision : 0