Key Parameters

V_{RRM}	= 1600V
$I_{F(AV)}$	= 350A
I_{FSM}	= 6400A
$V_{F(TO)}$	= 0.77V
r_F	= 0.36mΩ

Features

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Flat base

Applications

- Power Supplies
- Uncontrolled Rectifiers
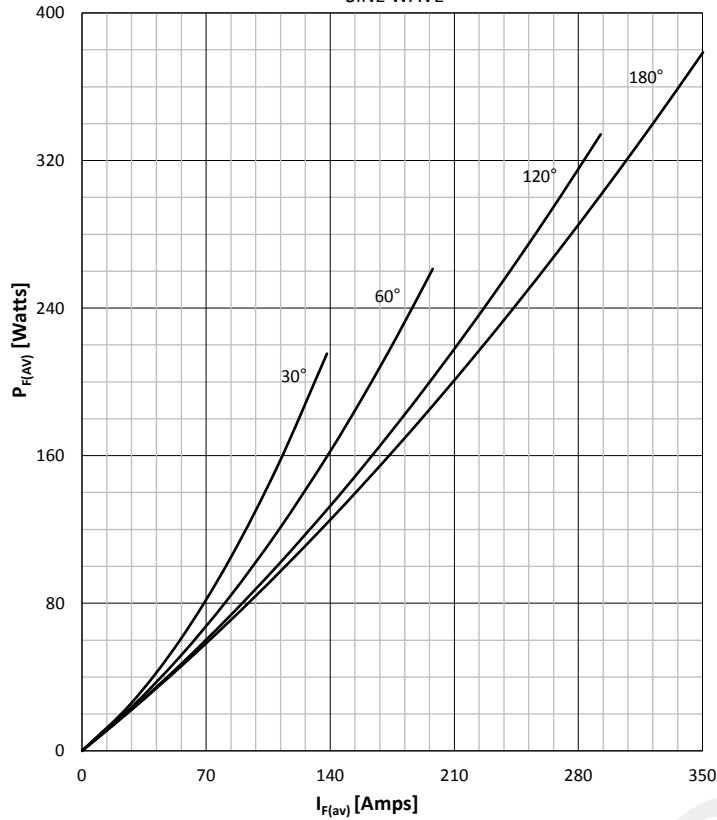- Battery Chargers

Ordering Information

MS D	350	N	X X	F	B
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = V_{RRM}	F = Flat Base	Technology B = Solder Bond Technology

Order Code MS D350N16FB : 1600V V_{RRM}, Flat Base, Diode with base Cathode

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

| Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V RRM	Repetitive peak reverse voltage		180	200 - 1600	V
V RSM	Non-repetitive peak reverse voltage		180	300 - 1700	V
I RRM	Repetitive peak reverse current	V= V RRM	180	50	mA
CONDUCTING					
I F (AV)	Mean forward current	180° sin ,50 Hz, Tc=125°C		350	A
I FRMS	RMS current			550	A
I FSM	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	6400	A
			180	6000	A
I²t	I²t	Sine wave, 10 ms Without reverse voltage	25	205×10^3	A²s
			180	180×10^3	A²s
V F	Forward voltage	On-state current = 1050A	180	1.15	V
V F(TO)	Threshold voltage		180	0.77	V
r F	Forward slope resistance		180	0.36	mΩ
MOUNTING					
R th(j-c)	Thermal impedance, sin 180°	Junction to case		0.145	°C/W
R th(c-h)	Thermal impedance	Case to heatsink		0.02	°C/W
T j	Max. junction temperature			180	°C
T stg	Storage temperature			-40 180	°C
M	Mounting torque			20	NM
W	Weight (Approx.)			250	gm

DISSIPATION CHARACTERISTICS
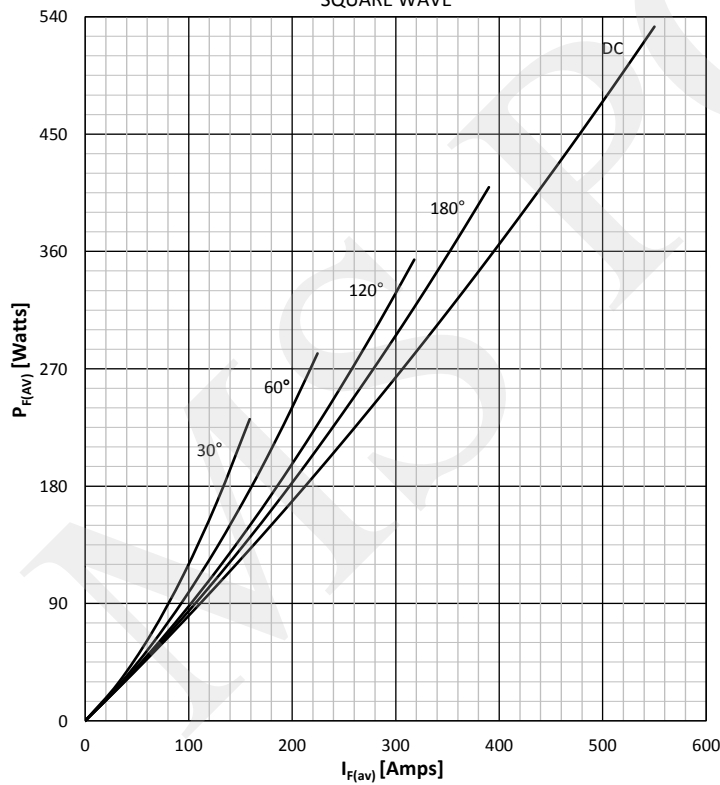### SINE WAVE

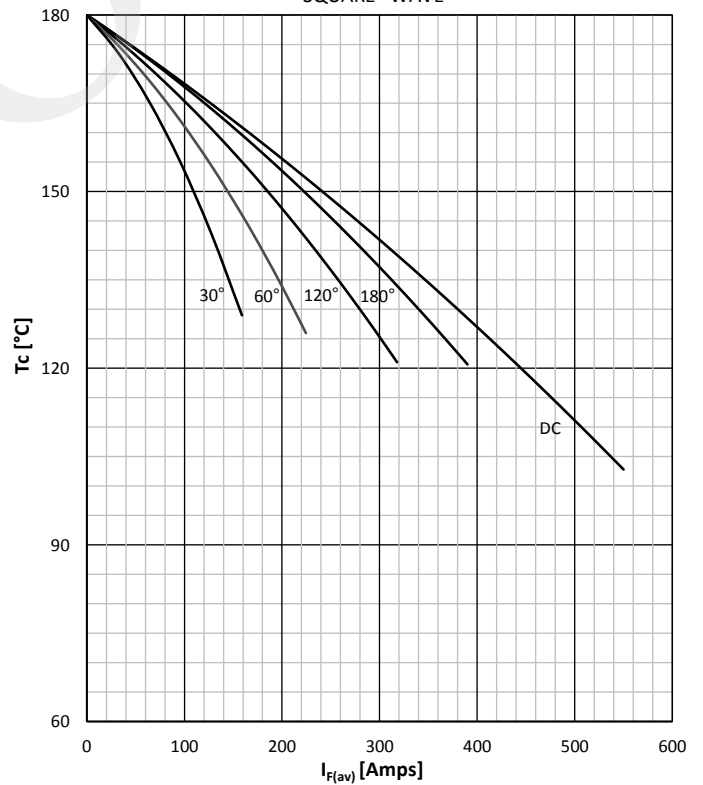## FORWARD CURRENT DERATING CURVE
SINE WAVE
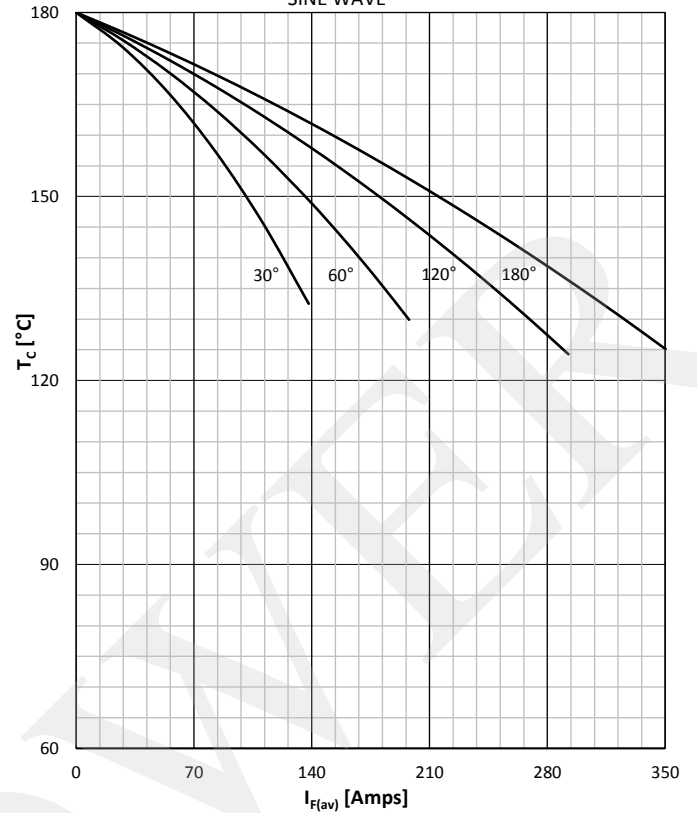
DISSIPATION CHARACTERISTICS
SQUARE WAVE

FORWARD CURRENT DERATING CURVE
SQUARE WAVE

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

FORWARD CHARACTERISTIC

Vertical axis: I_{FM} [Amp], Horizontal axis: V_{FM} [Volts]

Legend: 180°C (solid), 25°C (dashed)

SURGE CHARACTERISTICS

Vertical axis: $\frac{I_{F(OV)}}{I_{FSM}}$, Horizontal axis: t[ms]

$I_{FSM(25°C)} = 6400A$
$I_{FSM(180°C)} = 6000A$

$0 * V_{RRM}$
$0.5 * V_{RRM}$
$1 * V_{RRM}$
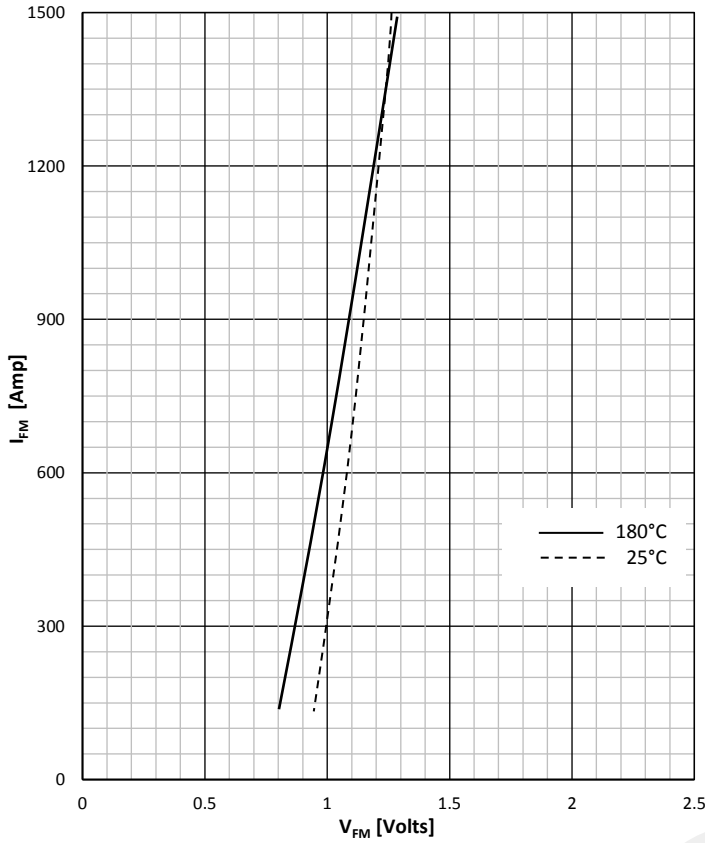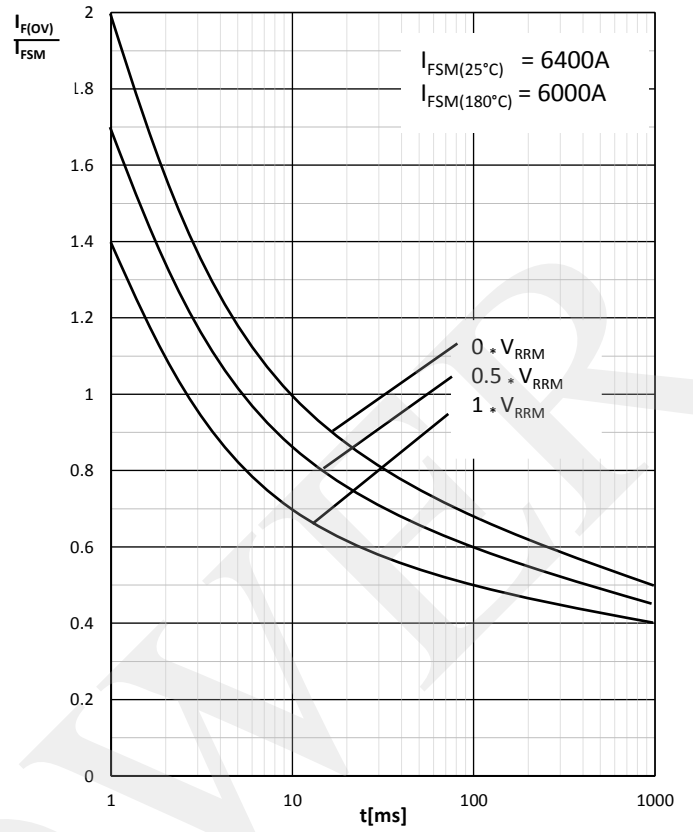
TRANSIENT THERMAL IMPEDANCE

Vertical axis: Z_{th} [°C/W], Horizontal axis: t[sec]

$Z_{th(j-h)}$
$Z_{th(j-c)}$
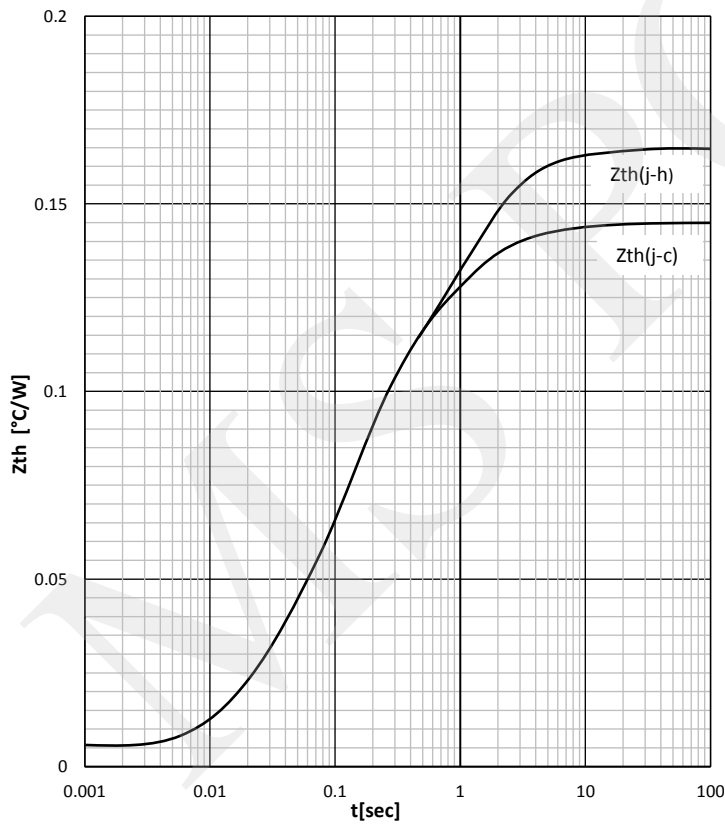
Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

Outline
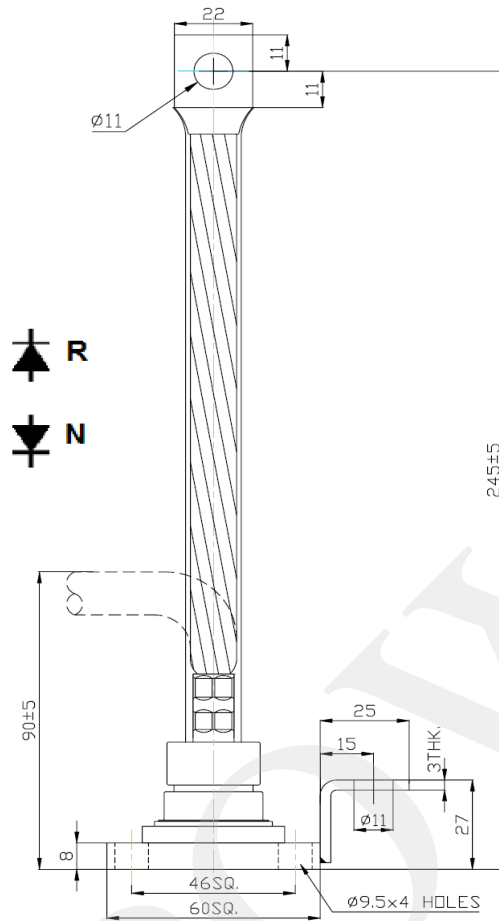
MS Power GmbH

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 : 25.03.2015
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 : 25.03.2015
Approved by : RBS	Revision : 0