

**Key Parameters**

$V_{RRM}$	= 1600V
$I_{F(AV)}$	= 420A
$I_{FSM}$	= 9000A
$V_{F(TO)}$	= 0.80V
$r_F$	= 0.45mΩ

**Features**

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Threaded Stud

**Applications**

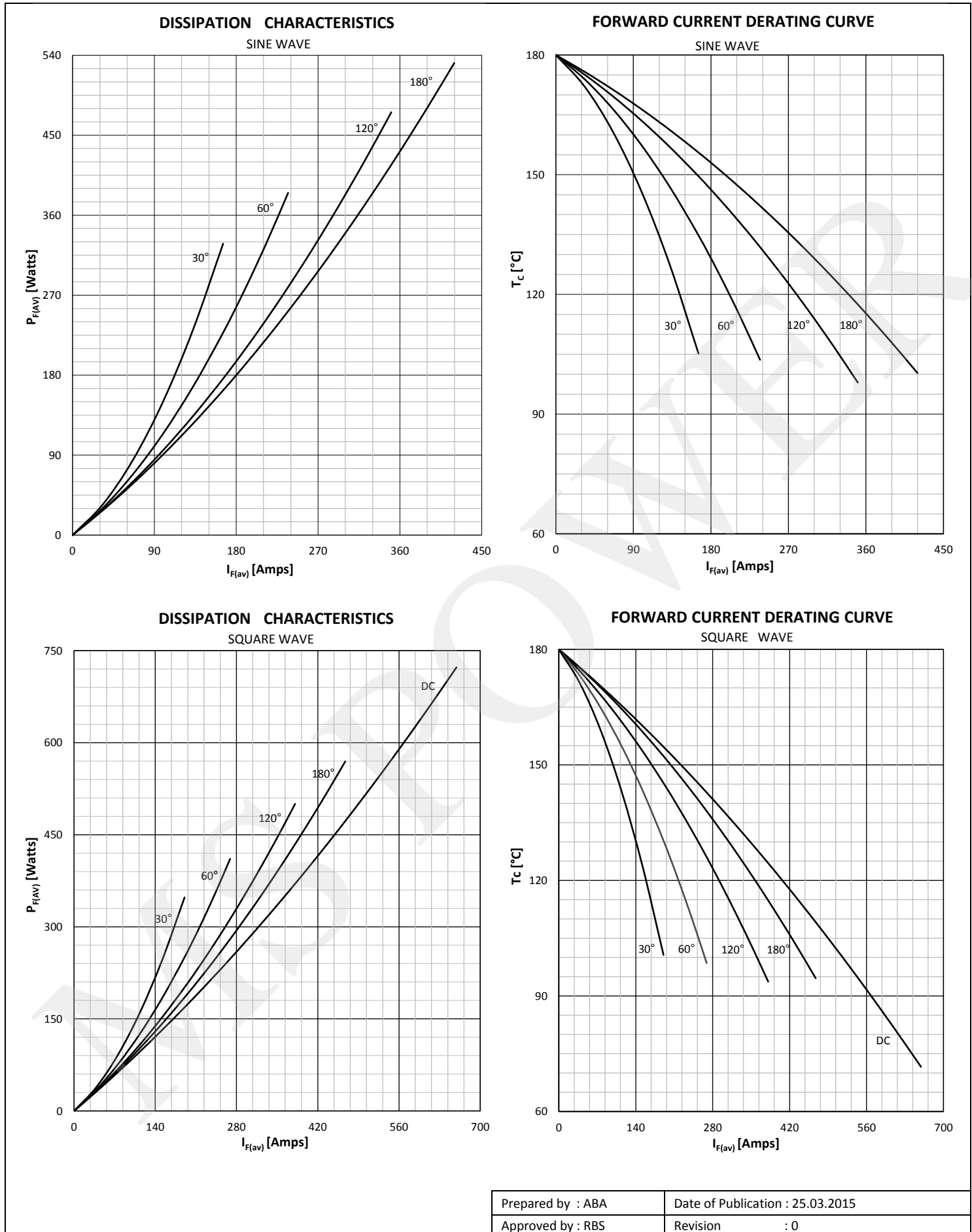
- Power Supplies
- Uncontrolled Rectifiers
- Battery Chargers

**Ordering Information**

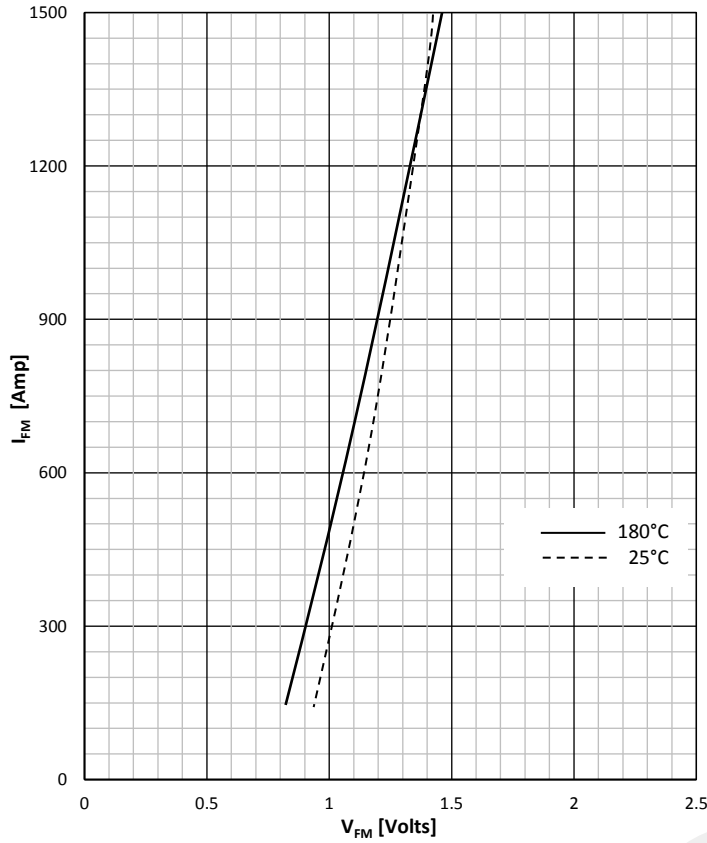
MS D	321	N	X X	M	B
Rectifier Diode	Current code	Polarity R= Stud Anode N= Stud Cathode	Voltage Code Code X 100 = $V_{RRM}$	Stud Threads M = Stud M24 X 1.5	Technology B = Solder Bond Technology
Order Code MS D321N16MB : 1600V $V_{RRM}$ , M24 Stud, Diode with stud Cathode					

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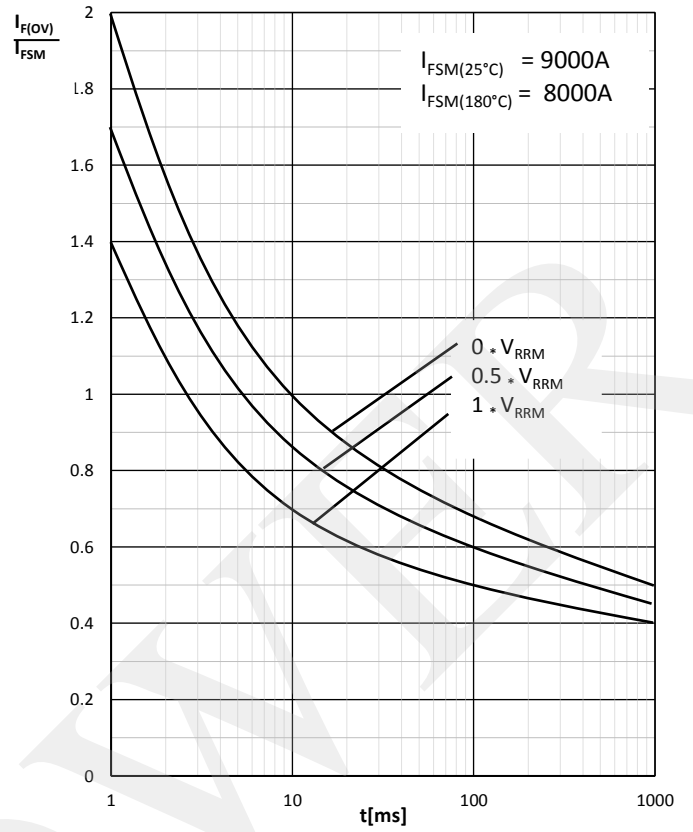
Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		180	200 - 1600	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		180	300 - 1700	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	180	40	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, T <sub>c</sub> =100°C T <sub>c</sub> =125°C		420 320	A
I <sub>FRMS</sub>	RMS current			659	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	9000	A
			180	8000	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	405 x 10 <sup>3</sup>	A <sup>2</sup> s
			180	320 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 1000A	180	1.25	V
V <sub>F(TO)</sub>	Threshold voltage		180	0.80	V
r <sub>F</sub>	Forward slope resistance		180	0.45	mΩ
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case		0.15	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink		0.015	°C/W
T <sub>j</sub>	Max. junction temperature			180	°C
T <sub>stg</sub>	Storage temperature			-40 .... 180	°C
M	Mounting torque			32	NM
W	Weight (Approx.)			350	gm
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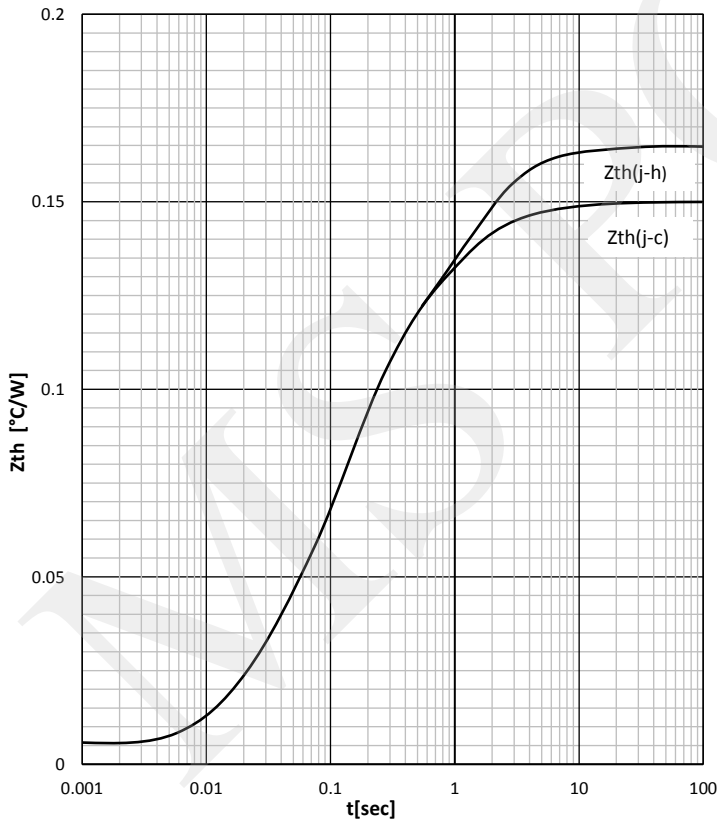
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

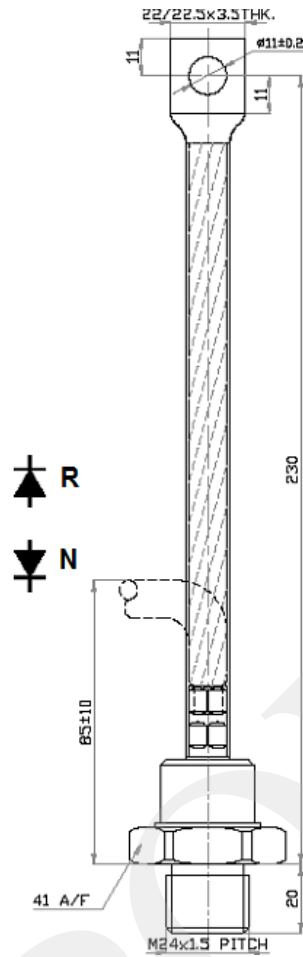


TRANSIENT THERMAL IMPEDANCE



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