



**Key Parameters**

$V_{RRM}$	= 1600V
$I_{F(AV)}$	= 36A
$I_{FSM}$	= 680A
$V_{F(TO)}$	= 0.85V
$r_F$	= 10.0mΩ

**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**

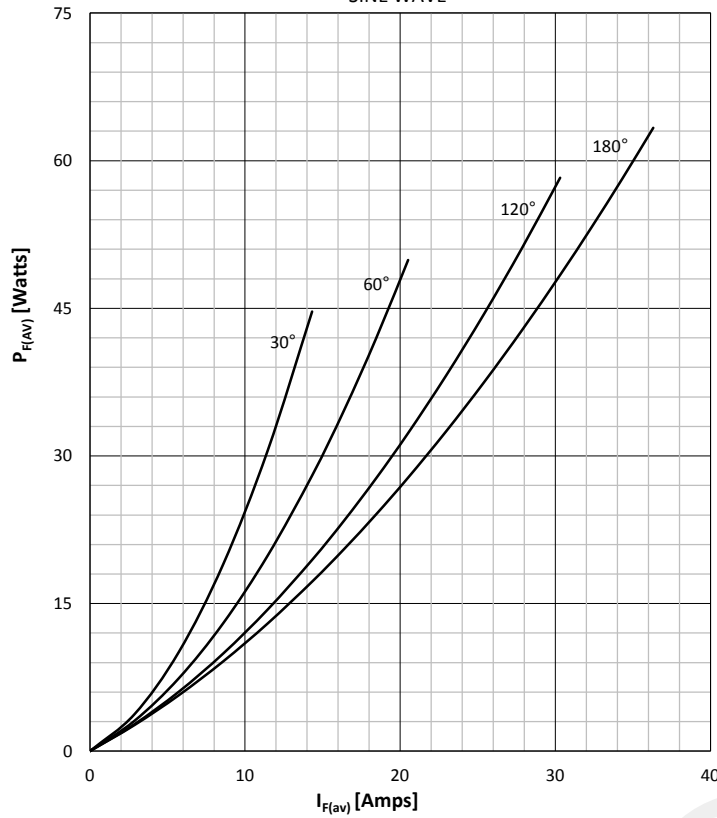
<b>MSZPA</b>	<b>36</b>	<b>N</b>	<b>XX</b>	<b>M</b>
Avalanche Rectifier Diode	Current code	Polarity R= Stud Anode N= Stud Cathode	Voltage Code Code X 100 = $V_{RRM}$	Stud Threads M = Stud M6 X 1 U = 10/32" UNF
Order Code MSZPA36N16M : 1600V $V_{RRM}$ , Metric Stud, Avalanche Diode with stud Cathode				

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

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		150	200 - 1600	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		150	400 - 1800	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	150	0.5	mA
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	150	3	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, T <sub>c</sub> = 85°C		36	A
I <sub>FRMS</sub>	RMS current			57	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms With 50% V <sub>RRM</sub>	25	680	A
			150	600	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms With 50% V <sub>RRM</sub>	25	2312	A <sup>2</sup> s
			150	1800	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 90A	150	1.60	V
V <sub>F(TO)</sub>	Threshold voltage		150	0.85	V
r <sub>F</sub>	Forward slope resistance		150	10	mΩ
P <sub>RSM</sub>	Non-repetitive peak reverse power	10μs square wave	25	18	kW
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case		0.85	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink		0.25	°C/W
T <sub>j</sub>	Max. junction temperature			150	°C
T <sub>stg</sub>	Storage temperature			-40 .... 150	°C
M	Mounting torque			2	NM
W	Weight (Approx.)			12	gm
			Prepared by : ABA	Date of Publication : 25.03.2015	
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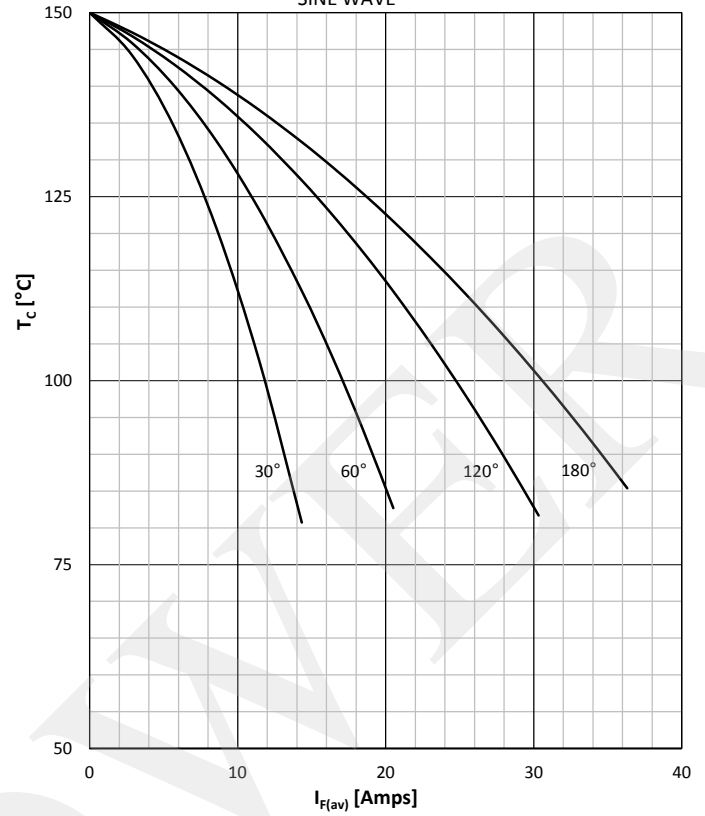
DISSIPATION CHARACTERISTICS

SINE WAVE



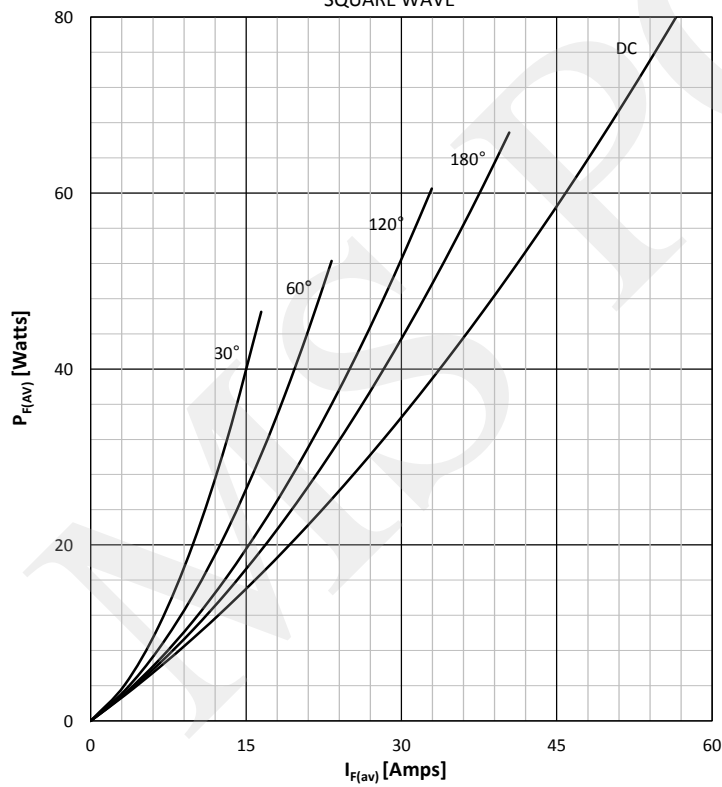
FORWARD CURRENT DERATING CURVE

SINE WAVE



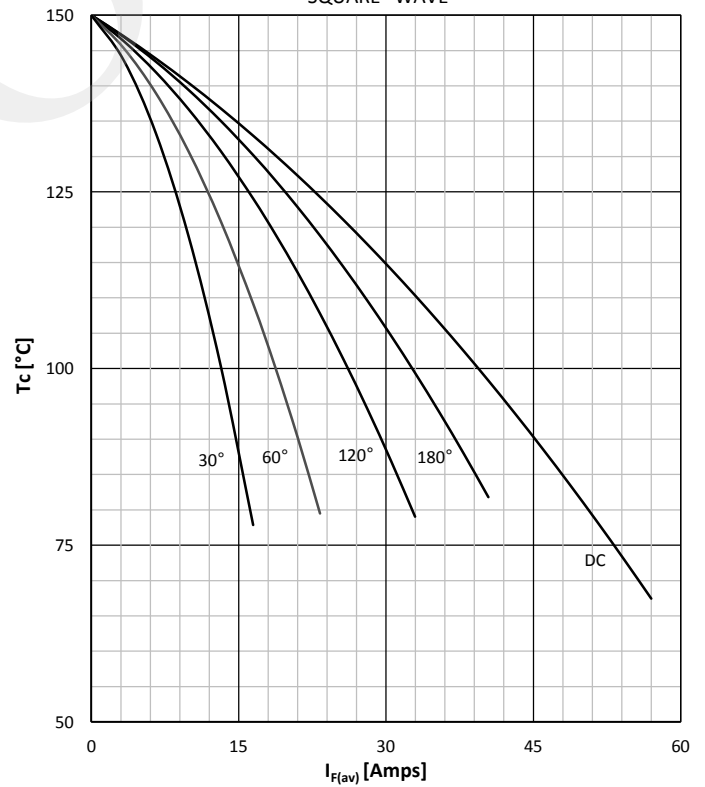
DISSIPATION CHARACTERISTICS

SQUARE WAVE



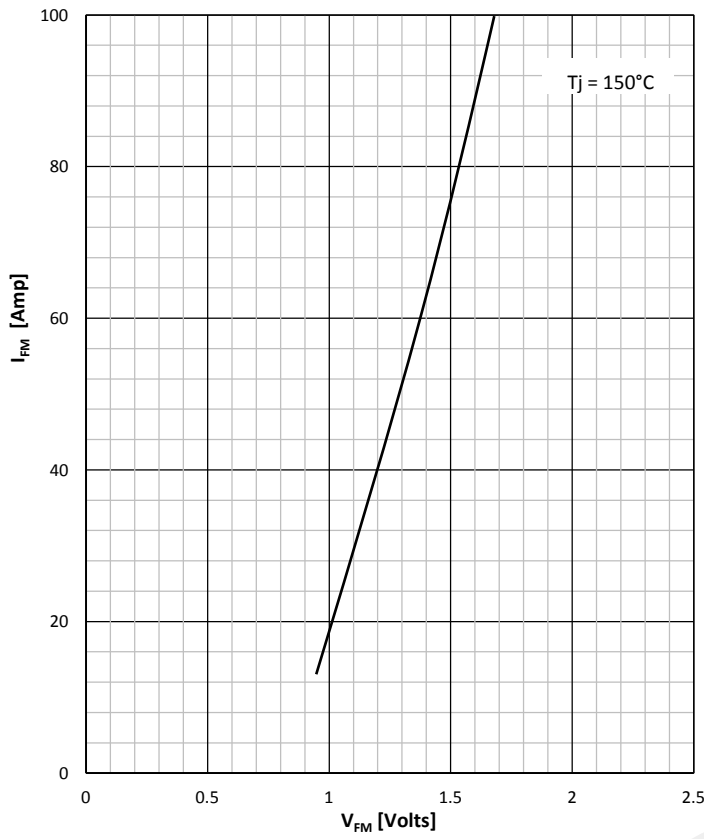
FORWARD CURRENT DERATING CURVE

SQUARE WAVE

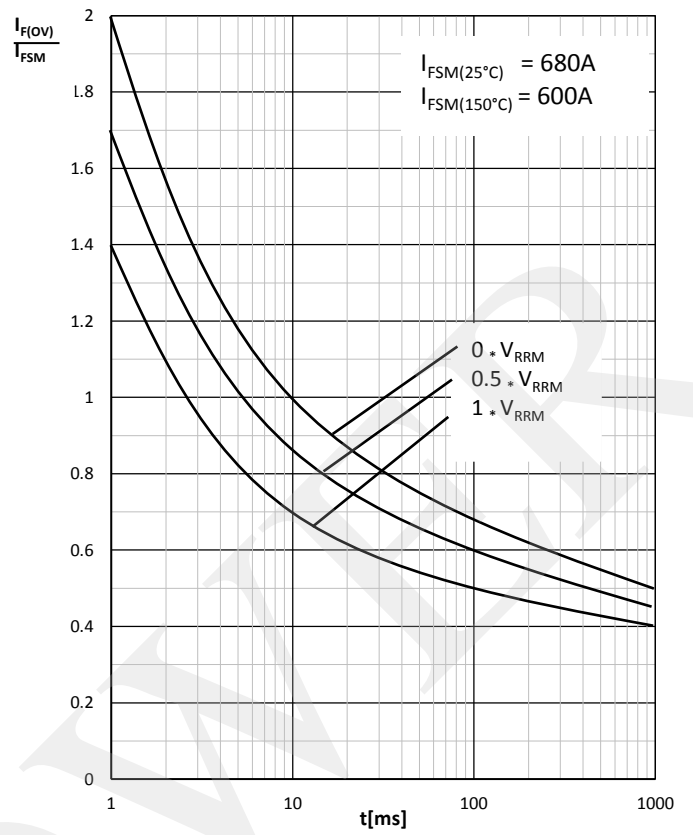


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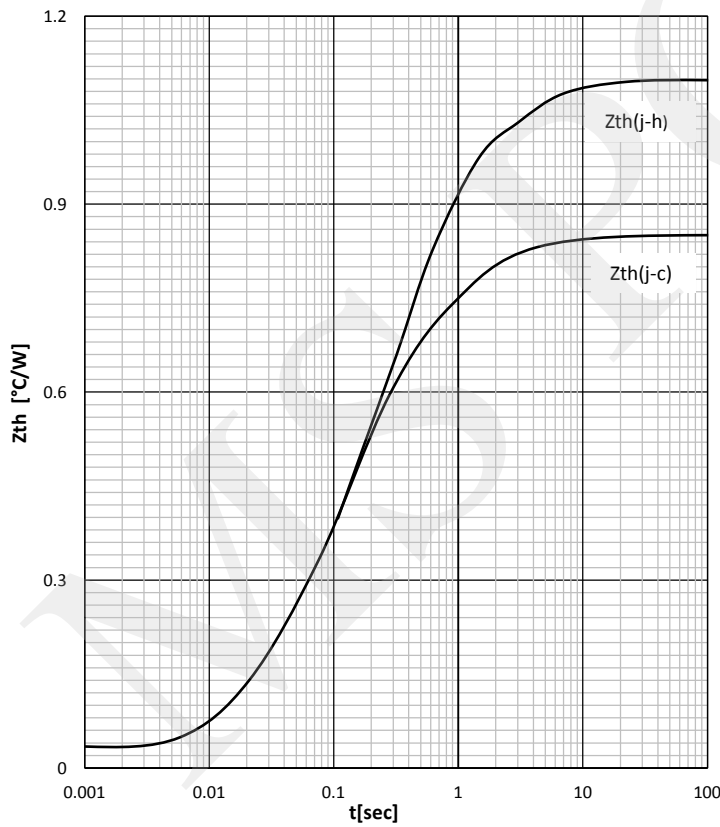
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



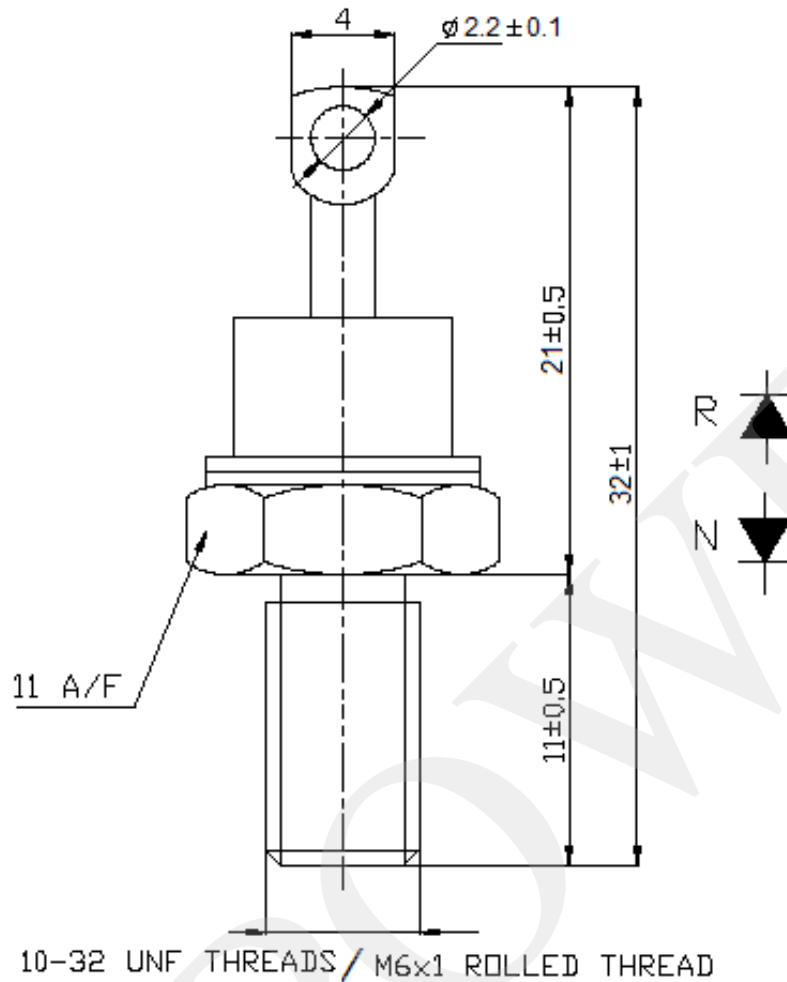
Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 0

Outline



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

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