

**Key Parameters**

$V_{RRM}$	= 2800V
$I_{F(AV)}$	= 318A
$I_{FSM}$	= 8500A
$V_{F(TO)}$	= 0.80V
$r_F$	= 0.67m $\Omega$

**Features**

- Full blocking capability over wide temperature range
- Pressure contacts technology for high reliability

**Applications**

- Power Supplies
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting
- Battery Chargers

**Ordering Information**

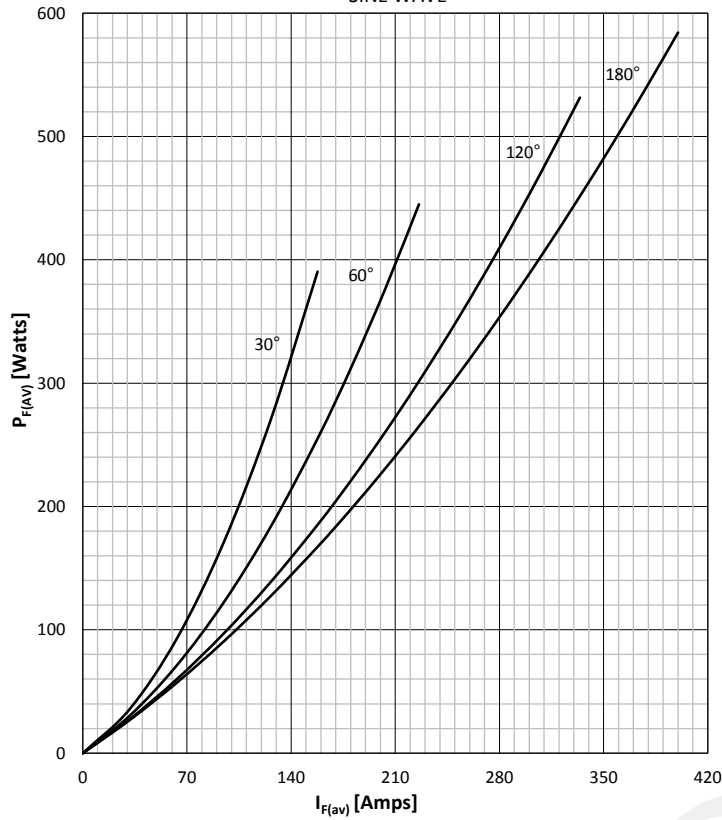
MS D	318	N	XX	F	K
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = $V_{RRM}$	F = Flat Base	Technology K = Pressure Contact Technology
Order Code MS D318N28FK : 2800V $V_{RRM}$ , Flat base, Diode with base Cathode					

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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		160	200 - 2800	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		160	300 - 2900	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	160	50	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin ,50 Hz, T <sub>c</sub> =120°C 180° sin ,50 Hz, T <sub>c</sub> =105°C		318 400	A
I <sub>FRMS</sub>	RMS current	T <sub>c</sub> =105°C		628	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	8500	A
			160	7500	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	361 x 10 <sup>3</sup>	A <sup>2</sup> s
			160	281 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 1260A	160	1.75	V
V <sub>F(TO)</sub>	Threshold voltage		160	0.80	V
r <sub>F</sub>	Forward slope resistance		160	0.67	mΩ
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case		0.094	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink		0.02	°C/W
T <sub>j</sub>	Max. junction temperature			160	°C
T <sub>stg</sub>	Storage temperature			-40 .... 160	°C
M	Mounting torque			1.66 - 2.07	KgM
W	Weight (Approx.)			530	gm
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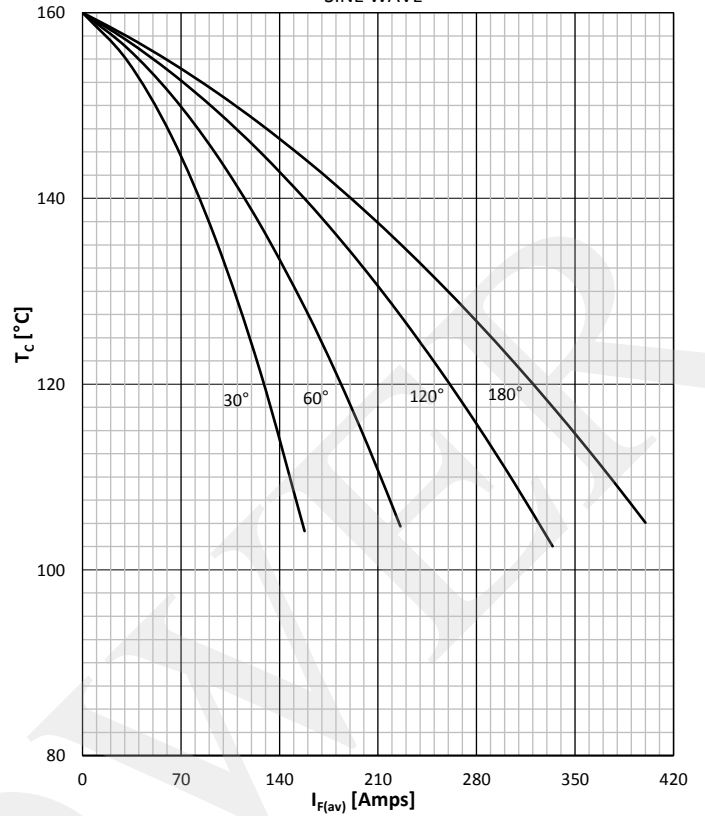
DISSIPATION CHARACTERISTICS

SINE WAVE



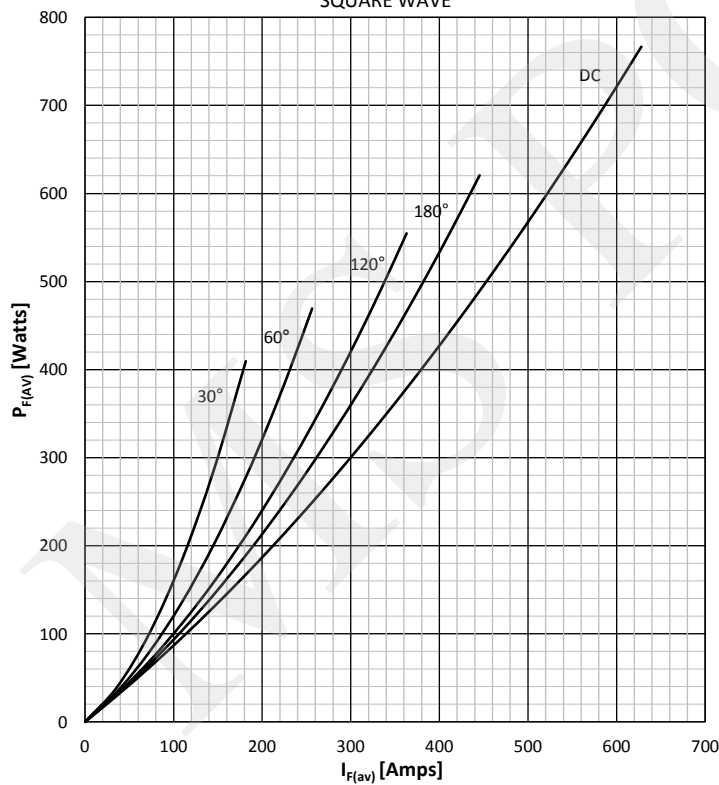
FORWARD CURRENT DERATING CURVE

SINE WAVE



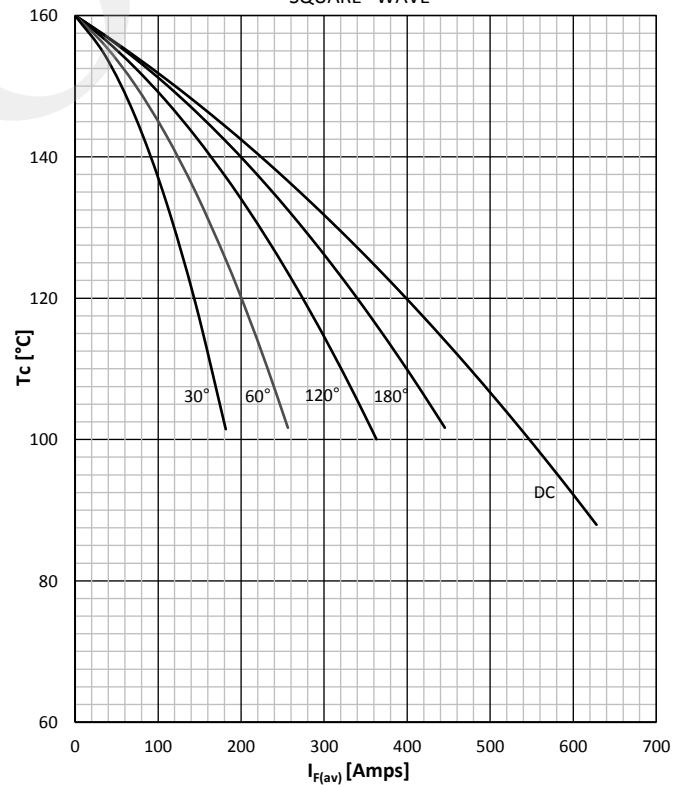
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



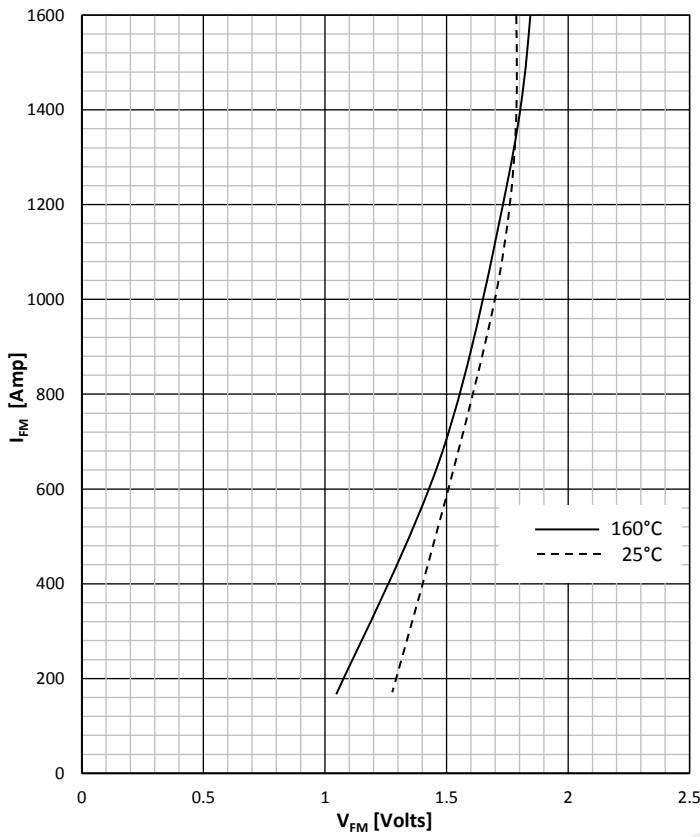
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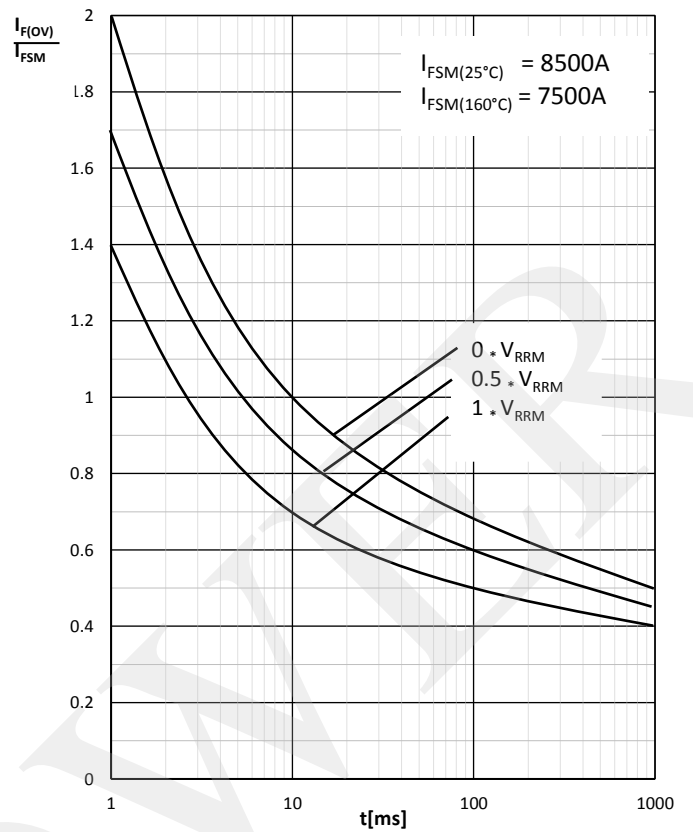
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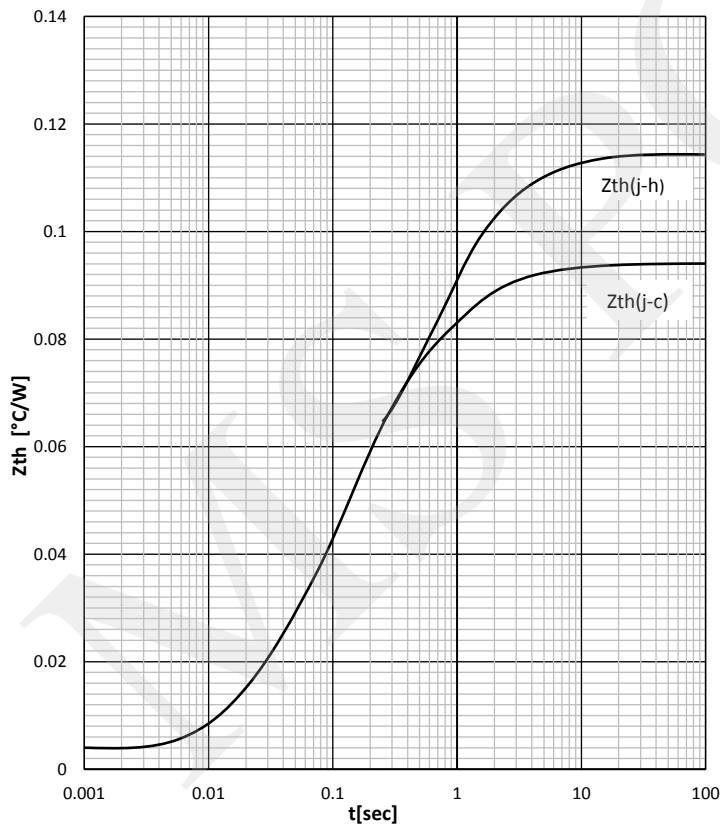
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

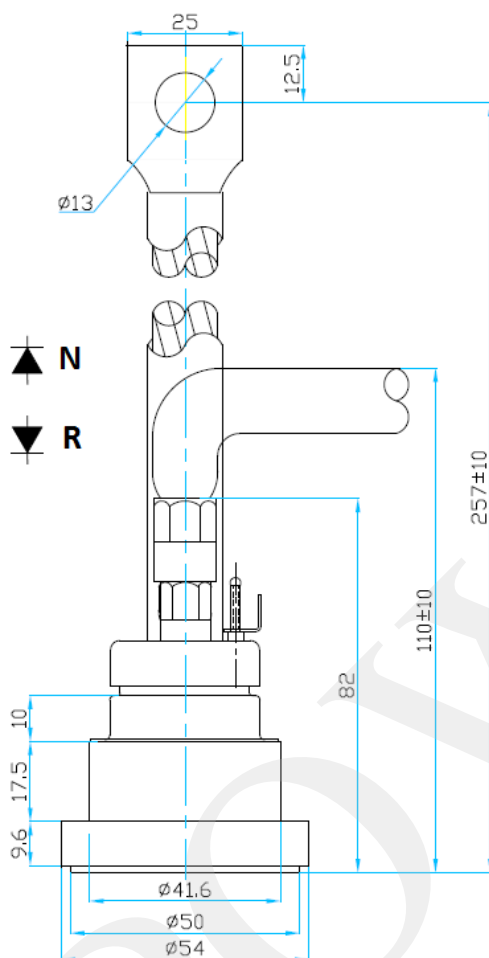


TRANSIENT THERMAL IMPEDANCE



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## Outline



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