



Key Parameters

V_{RRM}	= 5000V
$I_{F(AV)}$	= 4161A
I_{FSM}	= 48000A
$V_{F(TO)}$	= 1.02V
r_F	= 0.12mΩ

Features

- Full blocking capability over wide temperature range
- Hermetically sealed ceramic package
- High case non-rupture current

Applications

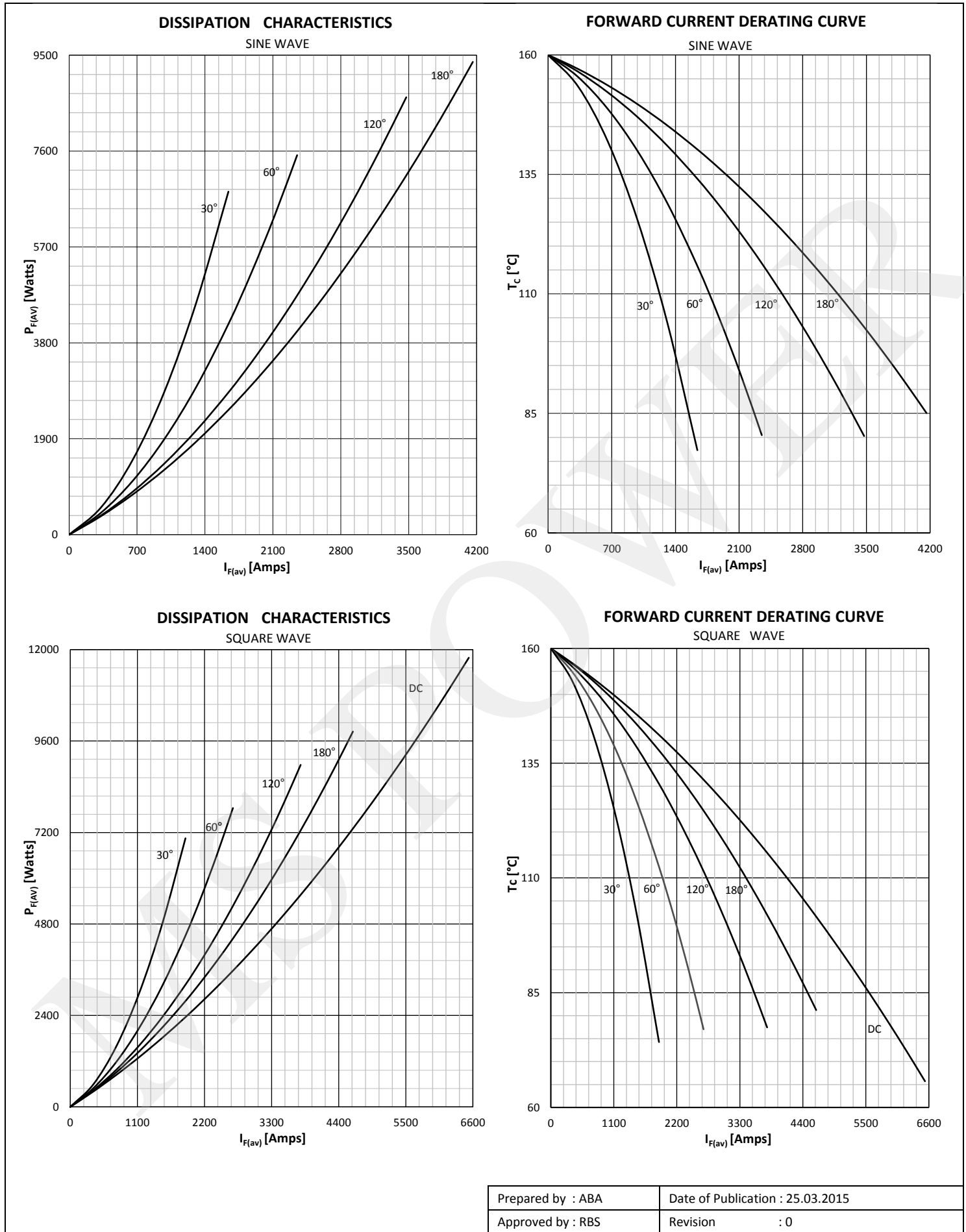
- Traction Rectifiers
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

Ordering Information

MS D	4161	C	XX
Rectifier Diode	Current code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS D4161C50 : 5000V V_{RRM} , Capsule Diode			

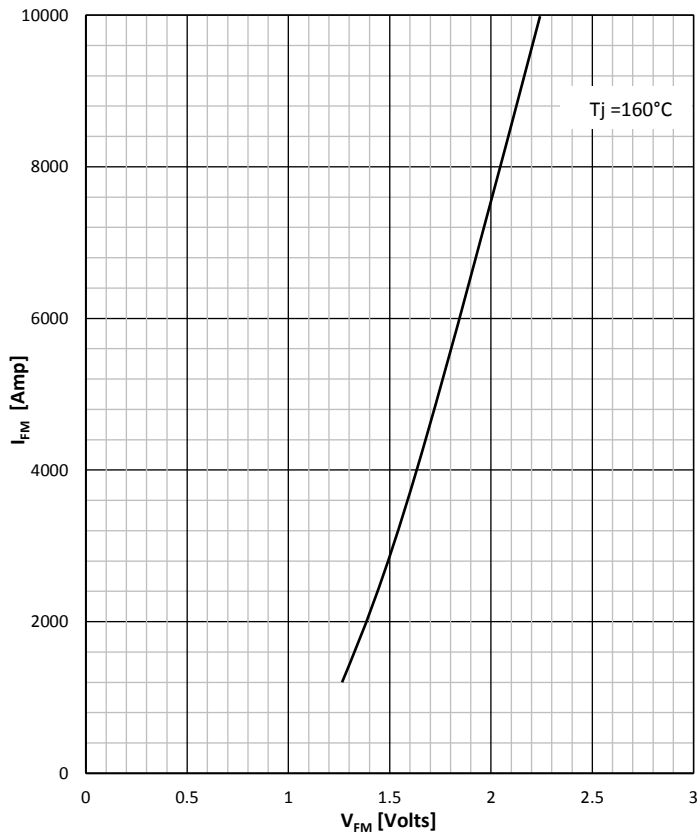
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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		160	4300 - 5000	V
V _{RSM}	Non-repetitive peak reverse voltage		160	4400 - 5100	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	160	200	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin, 50 Hz, T _c =85°C, double side cooled 180° sin, 50 Hz, T _c =100°C, double side cooled		4161 3600	A
I _{FRMS}	RMS current			6533	A
I _{FSM}	Surge forward current	Sine wave, 10 ms V _R = 0.6V _{RRM}	25	48000	A
			160	46000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	11520 x 10 ³	A ² s
			160	10580 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 4000A	160	1.65	V
V _{F(TO)}	Threshold voltage		160	1.02	V
r _F	Forward slope resistance		160	0.12	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, double side cooled		0.008	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, double side cooled		0.003	°C/W
T _j	Max. junction temperature			160	°C
T _{stg}	Storage temperature			-40 150	°C
M	Clamping force			35 - 47	KN
W	Weight (Approx.)			1100	gm
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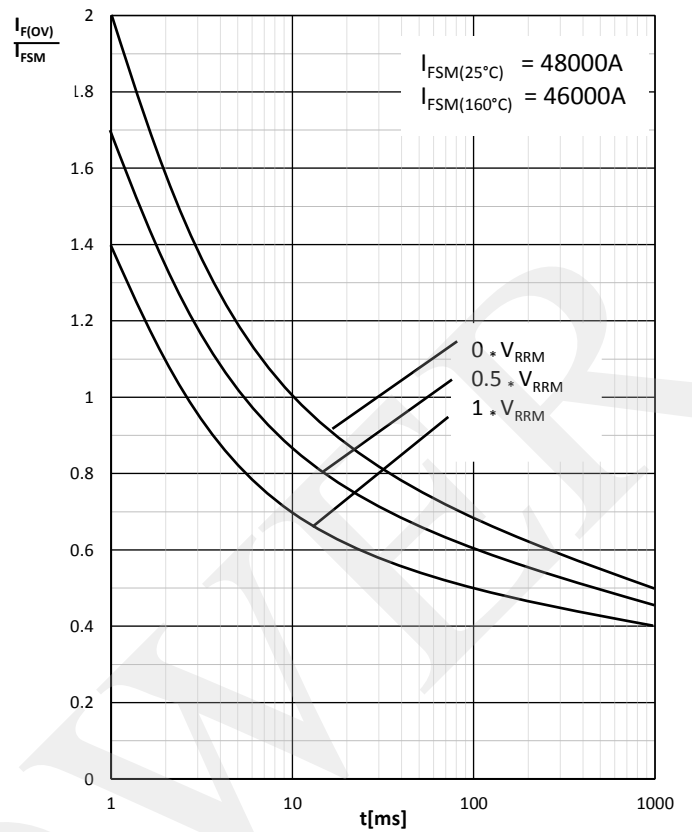


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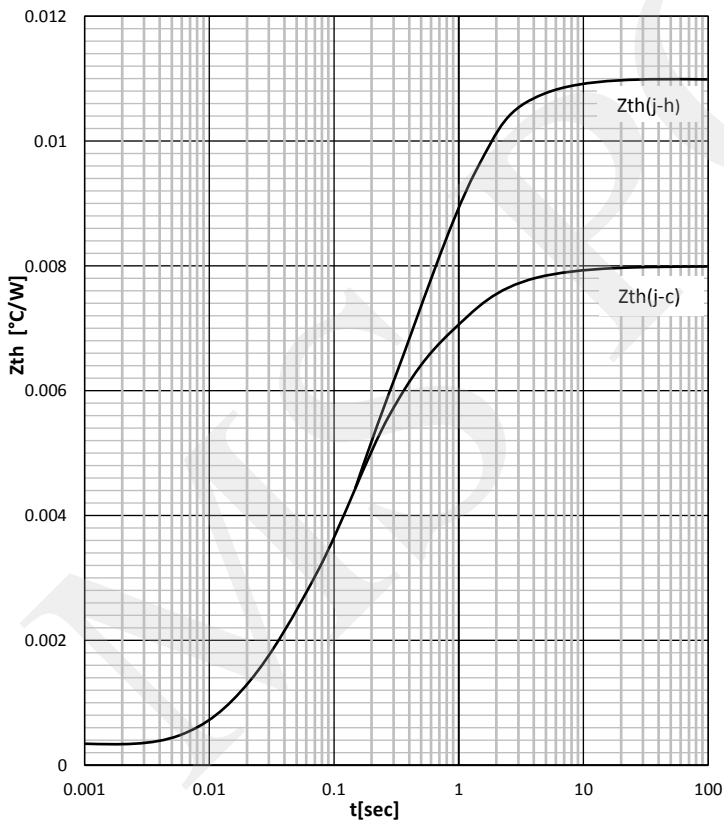
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

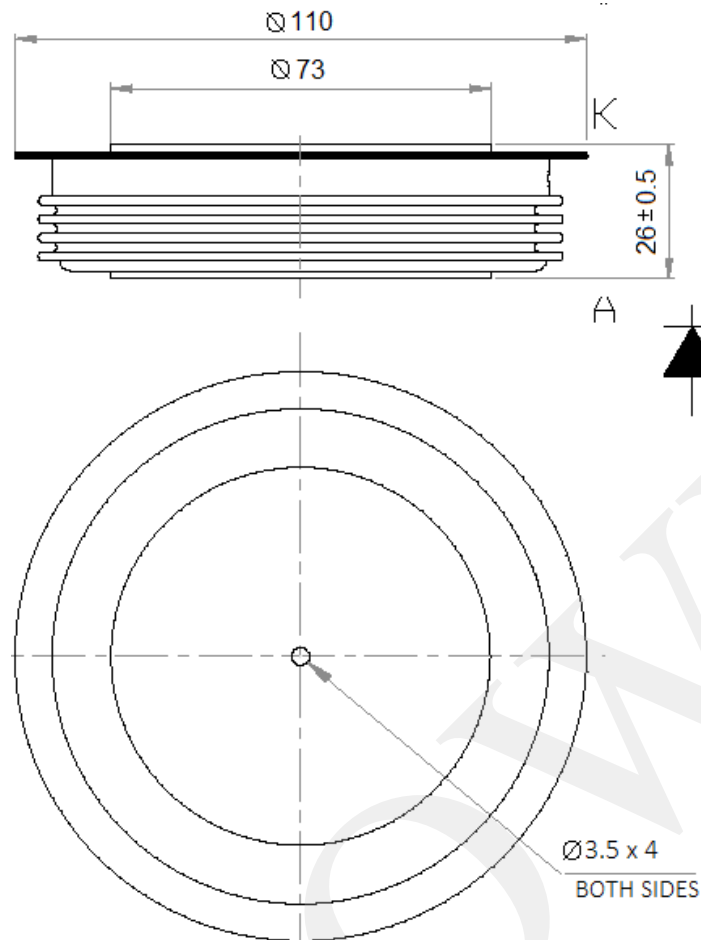


TRANSIENT THERMAL IMPEDANCE



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