



Key Parameters

V_{RRM}	= 2200V
$I_{F(AV)}$	= 1280A
I_{FSM}	= 48000A
$V_{F(TO)}$	= 0.80V
r_F	= 0.100mΩ

Features

- Full blocking capability over wide temperature range
- Heat transfer through aluminium nitride ceramic isolated metal base plate
- Pressure contacts technology for high reliability

Applications

- Power Supplies
- Uncontrolled Rectifiers
- Field supply for DC motors
- Battery Chargers
- UPS

Ordering Information

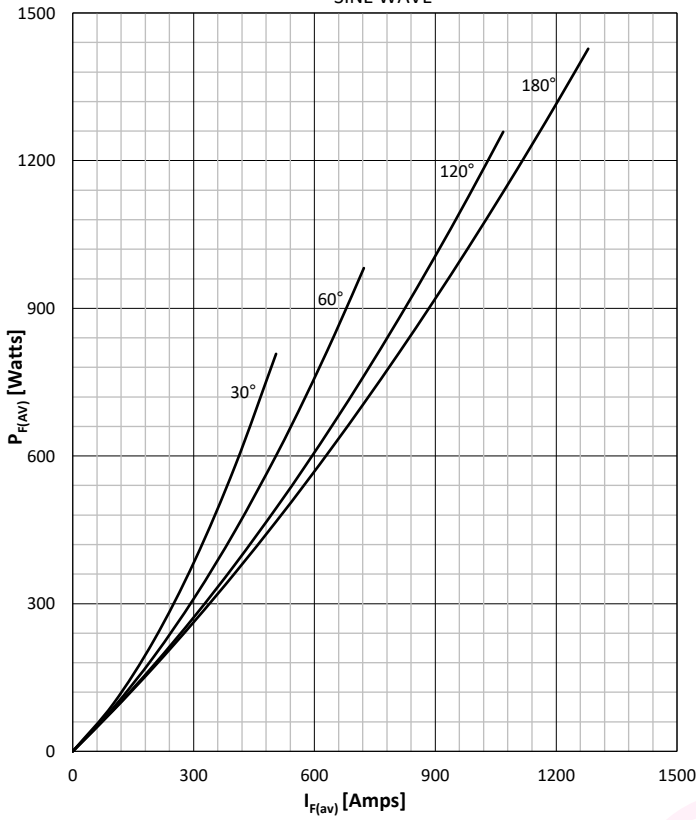
MS	DZ	1281	K	XX
Fixed code	DZ- Rectifier Diode Module	Current Code	Technology K = Pressure Contact Technology	Voltage Code Code X 100 = V_{RRM}
Order Code MS DZ1281K22 : 2200V V_{RRM} , Rectifier Diode Module				

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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		160	2000 - 2200	V
V _{RSM}	Non-repetitive peak reverse voltage		160	2100 - 2300	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	160	70	mA
CONDUCTING					
I _{F(AV)}	Mean forward current	180° sin ,50 Hz, T _c =100°C		1280	A
I _{FRMS}	RMS current	T _c =100°C		2009	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	48000	A
			160	40000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	11520 x 10 ³	A ² s
			160	8000 x 10 ³	A ² s
V _F	Forward voltage	On-state current = 3140A	25	1.30	V
V _{F(TO)}	Threshold voltage		160	0.80	V
r _F	Forward slope resistance		160	0.100	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, per module		0.042	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, per module		0.010	°C/W
T _j	Max. junction temperature			160	°C
T _{stg}	Storage temperature			-40 ... 150	°C
V _{ISOL}	Insulation test voltage, RMS	F=50Hz, 1min		3.0	KV
M1	Mounting torque			6 ± 15%	Nm
M2	Terminal connection torque			18 ± 10%	Nm
W	Weight (Approx.)			2000	gm
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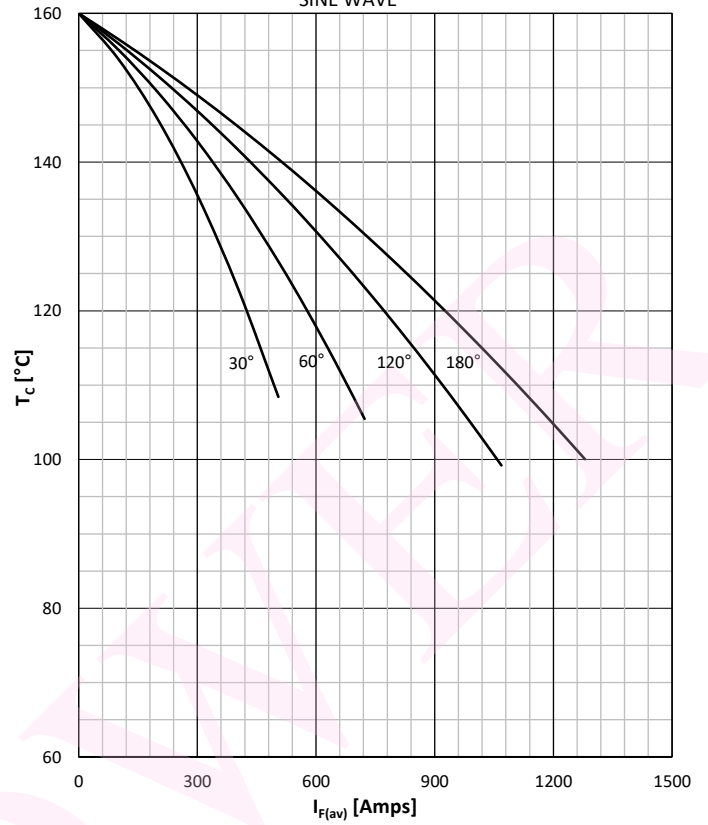
DISSIPATION CHARACTERISTICS

SINE WAVE



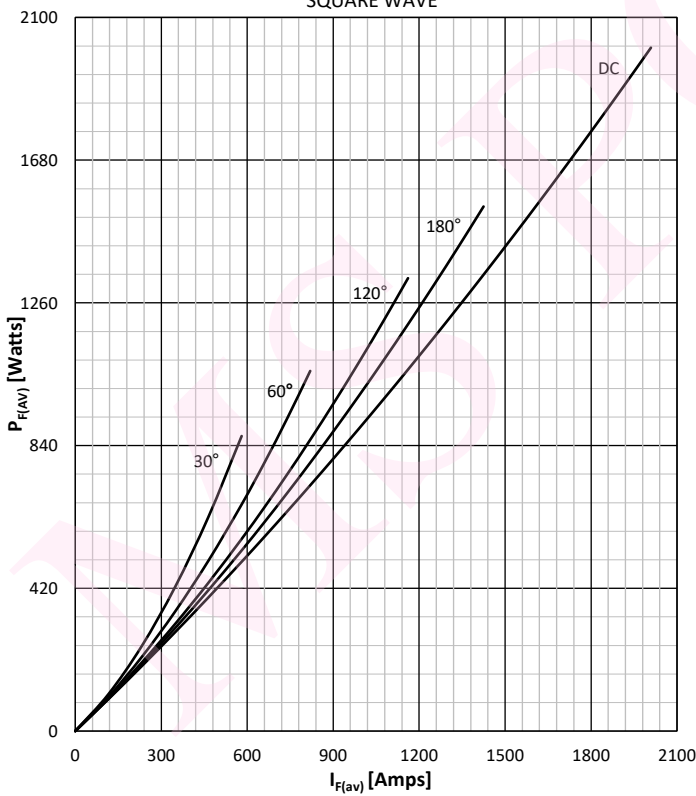
FORWARD CURRENT DERATING CURVE

SINE WAVE



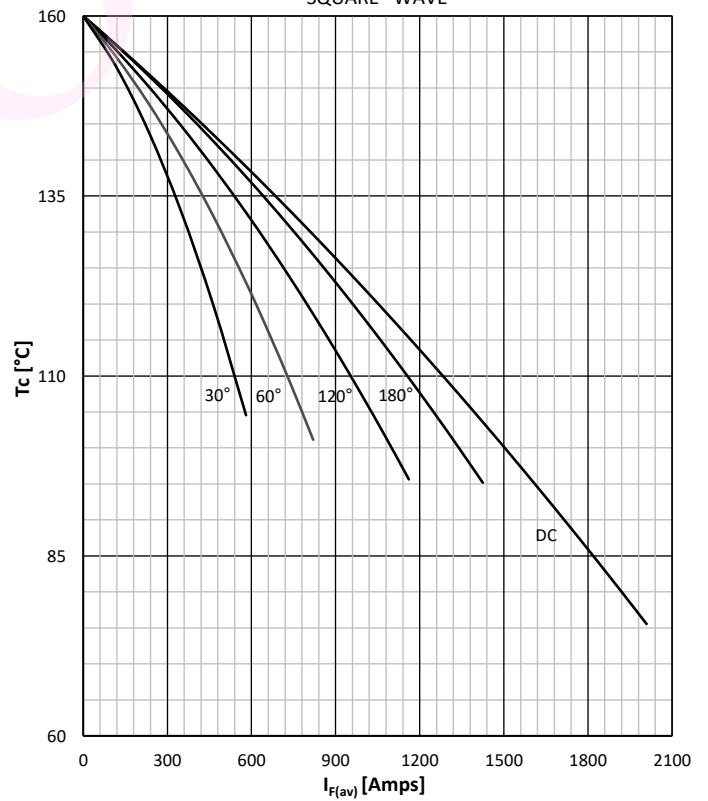
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



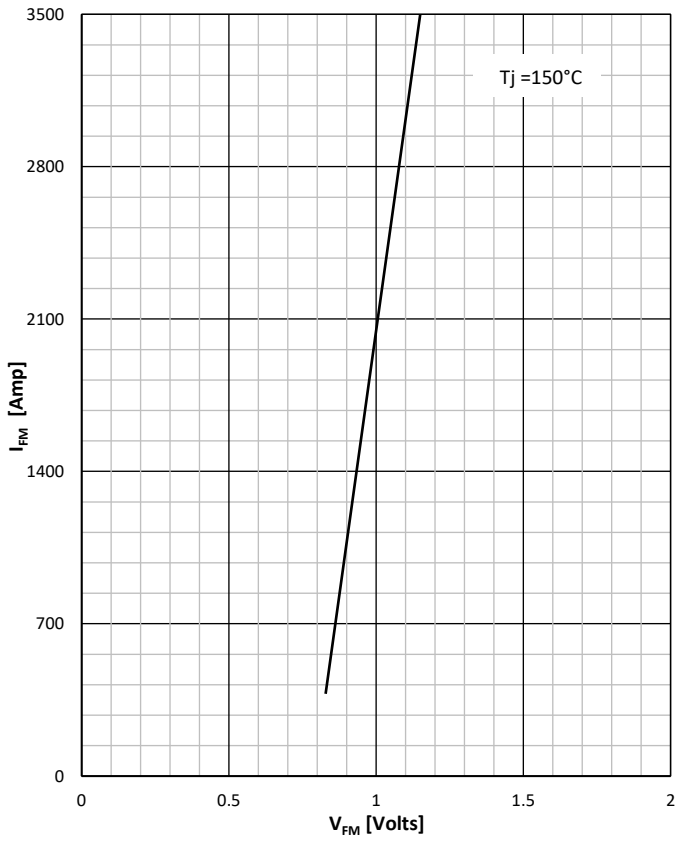
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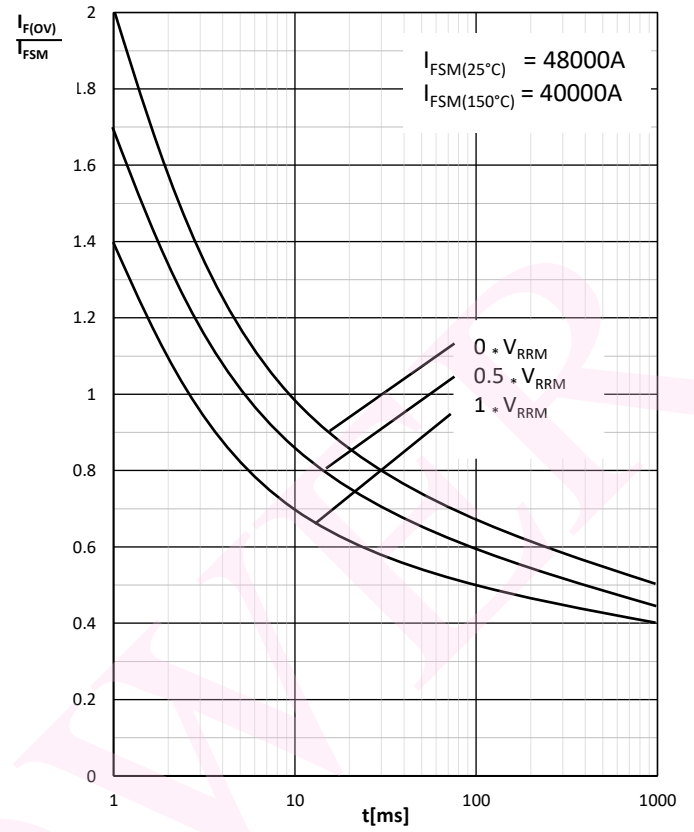
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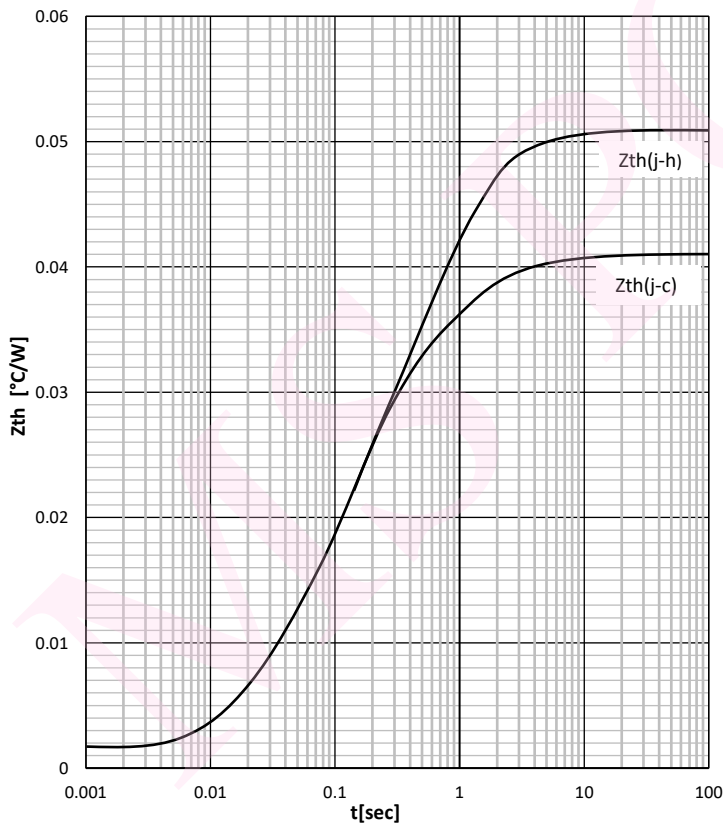
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



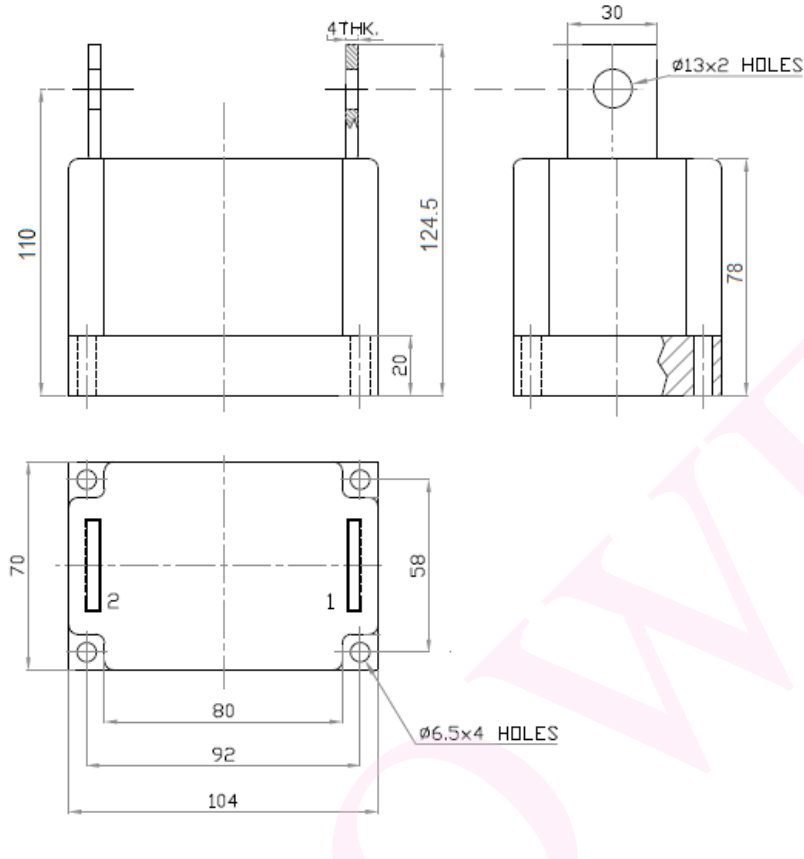
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