



Power Rectifier Diodes

Applications

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

Features

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

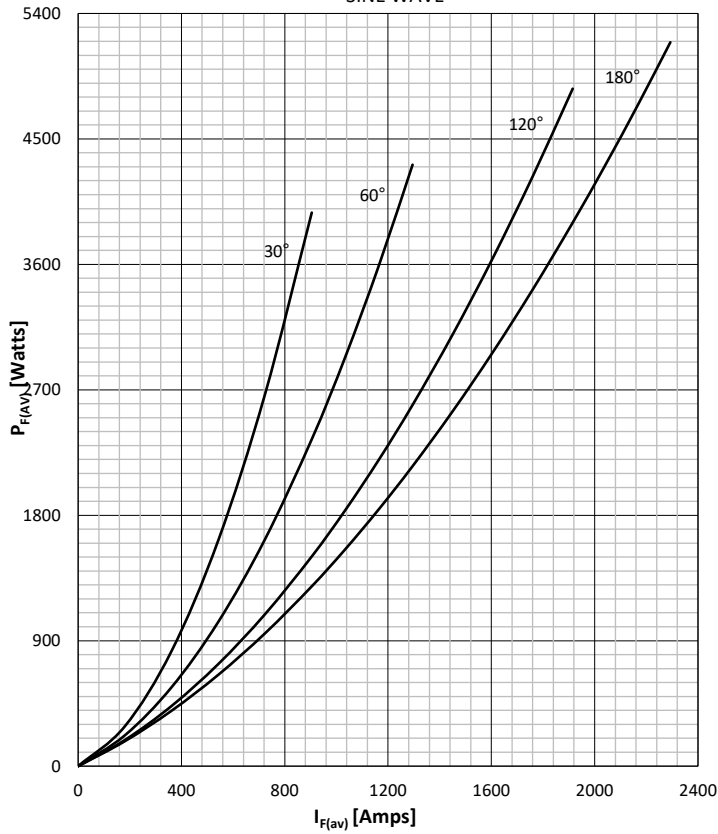
Key Parameters

V_{RRM}	= 3000V
$I_{F(AV)}$	= 2070A
I_{FSM}	= 26800A
$V_{F(TO)}$	= 0.88V
r_F	= 0.245mΩ

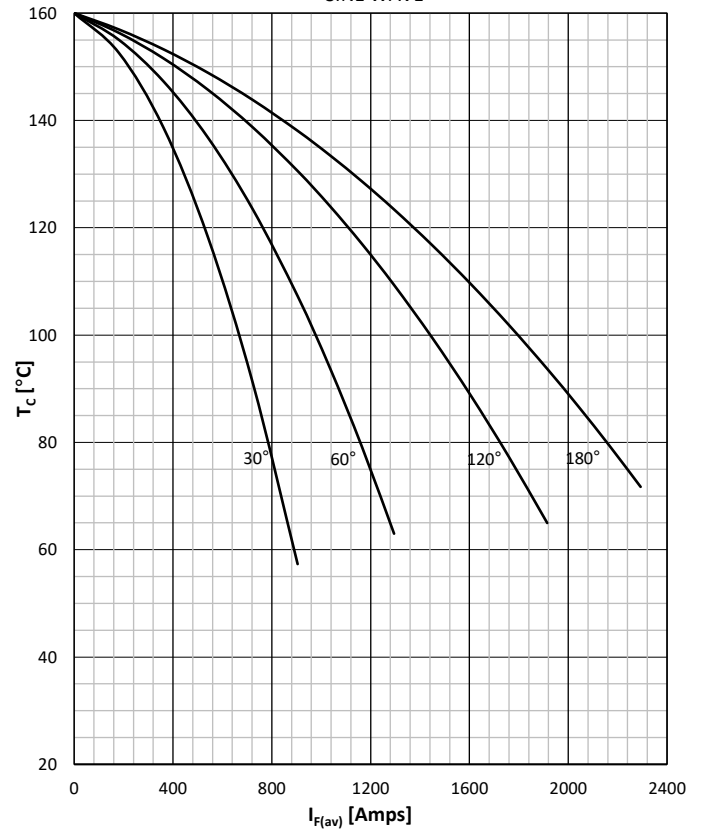
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		160	2200 - 3000	V
V_{RSM}	Non-repetitive peak reverse voltage		160	2300 - 3100	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	160	100	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin, 50 Hz, T _c =85°C, double side cooled 180° sin, 50 Hz, T _c =71°C, double side cooled		2070 2300	A
I_{FRMS}	RMS current	T _c =71°C, double side cooled		3611	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	26800	A
			160	26000	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	3591 x 10 ³	A ² s
			160	3380 x 10 ³	A ² s
V_F	Forward voltage	On-state current = 3000A	160	1.70	V
$V_{F(TO)}$	Threshold voltage		160	0.88	V
r_F	Forward slope resistance		160	0.245	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, double side cooled		0.017	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		0.0025	°C/W
T_j	Max. junction temperature			160	°C
T_{stg}	Storage temperature			-40 160	°C
M	Clamping force			30 - 45	KN
W	Weight (Approx.)			600	gm

DISSIPATION CHARACTERISTICS

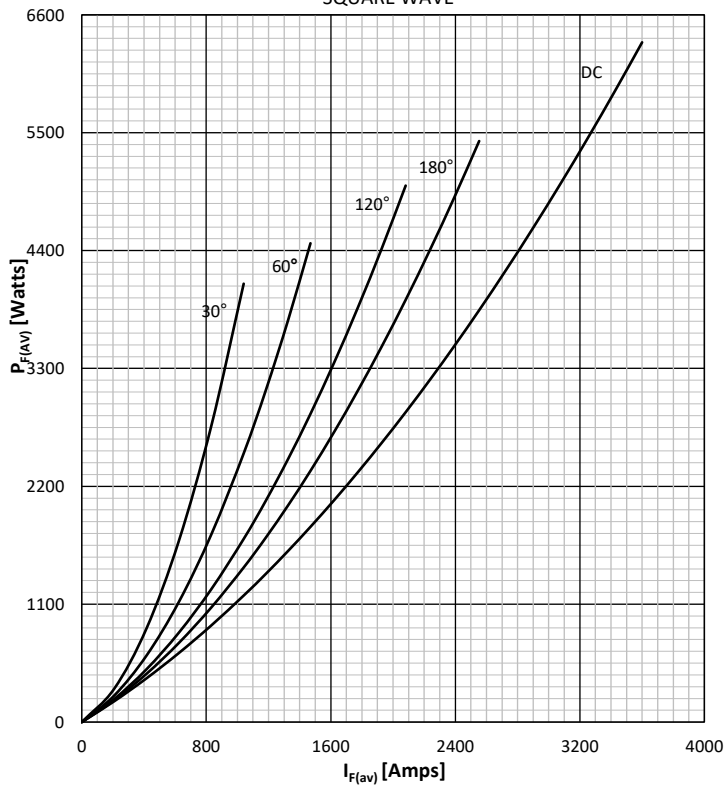
SINE WAVE


FORWARD CURRENT DERATING CURVE

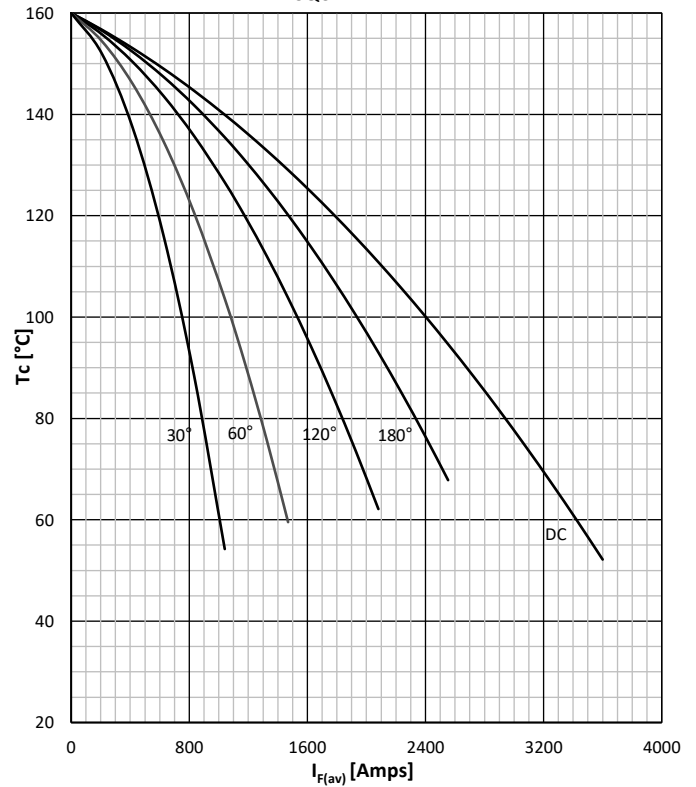
SINE WAVE


DISSIPATION CHARACTERISTICS

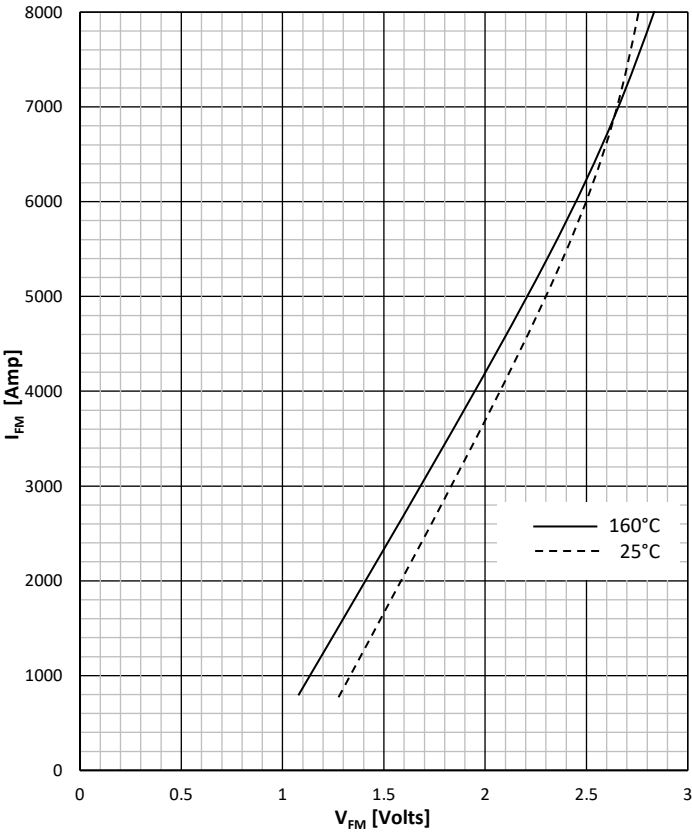
SQUARE WAVE


FORWARD CURRENT DERATING CURVE

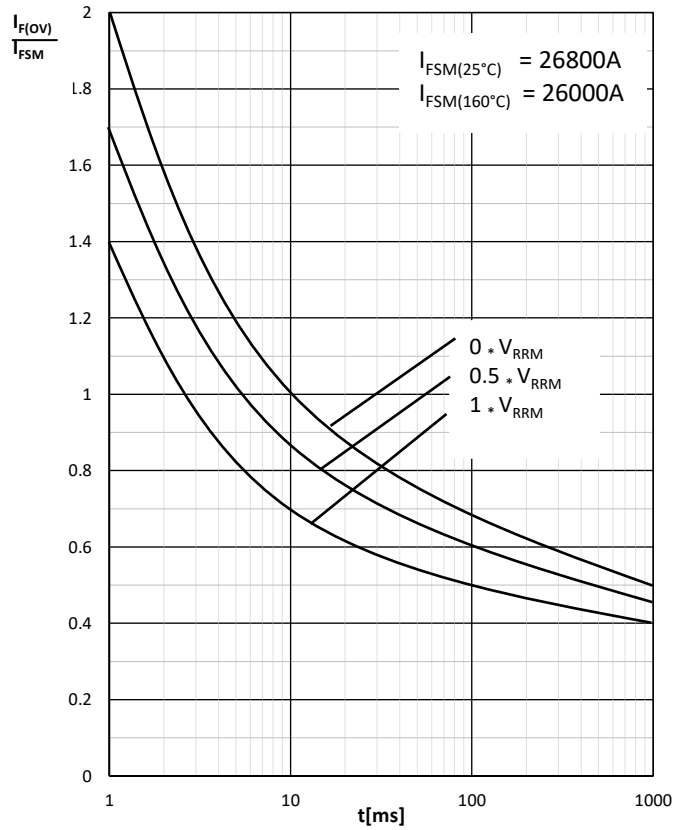
SQUARE WAVE



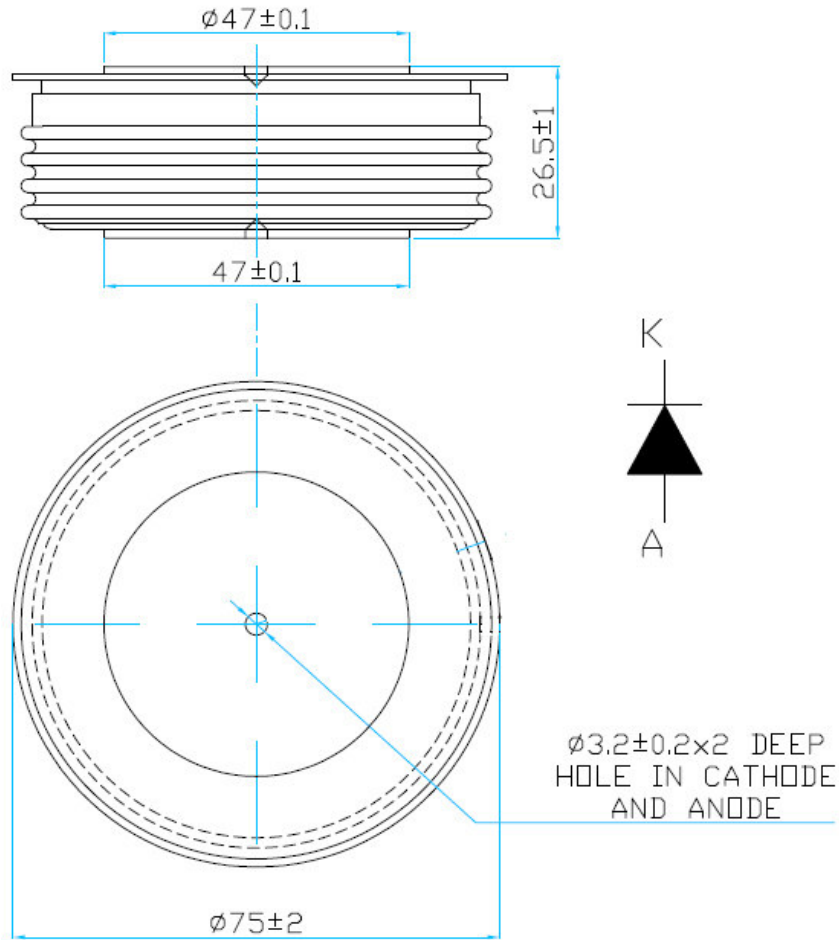
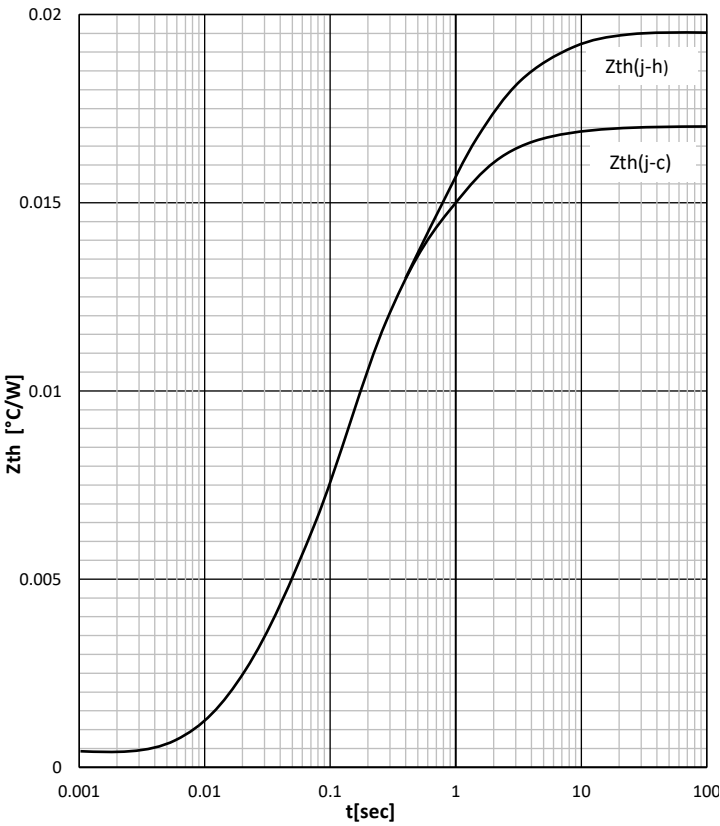
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, DSC



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