



Power Rectifier Diodes

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

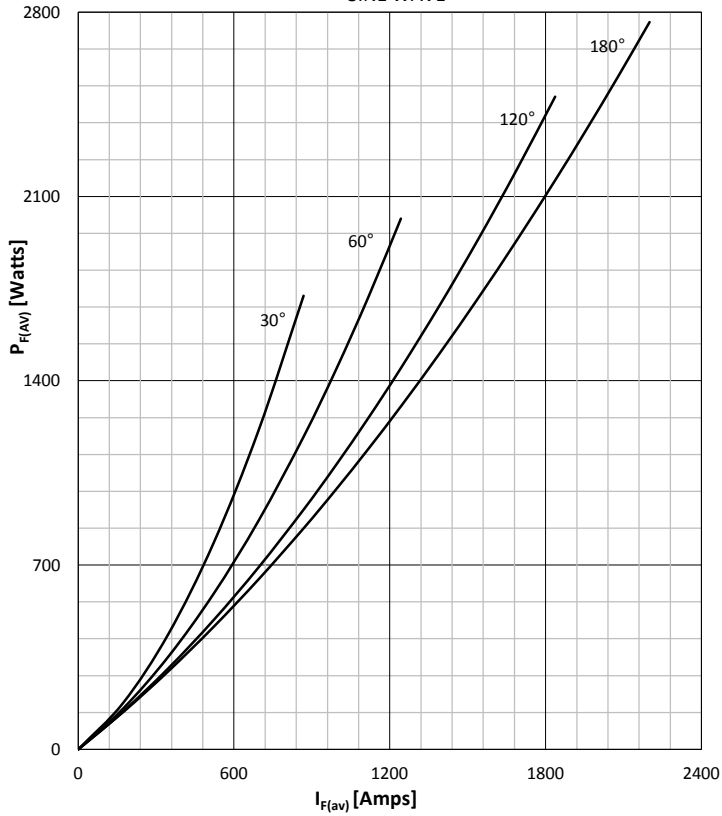
Key Parameters

V_{RRM}	= 1600V
$I_{F(AV)}$	= 2200A
I_{FSM}	= 29000A
$V_{F(TO)}$	= 0.79V
r_F	= 0.0877mΩ

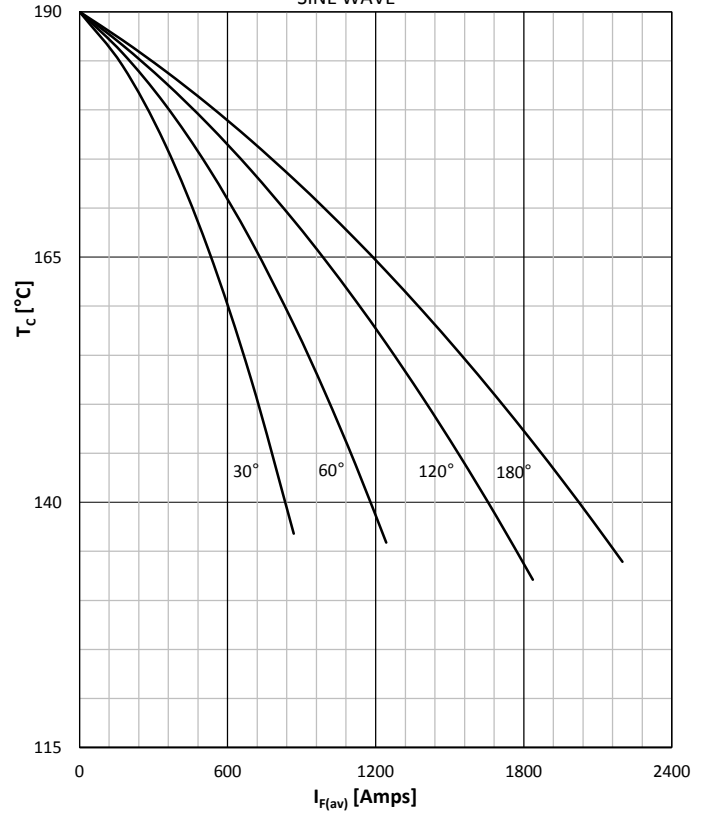
Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		190	200 - 1600	V
V_{RSM}	Non-repetitive peak reverse voltage		190	400 - 1800	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	190	150	mA
CONDUCTING					
$I_{F(AV)}$	Mean forward current	180° sin, 50 Hz, T _c =134°C, double side cooled		2200	A
I_{FRMS}	RMS current			3454	A
I_{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	29000	A
			190	27500	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	4205 x 10 ³	A ² s
			190	3781 x 10 ³	A ² s
V_F	Forward voltage	On-state current = 2000A	190	0.97	V
$V_{F(TO)}$	Threshold voltage		190	0.78	V
r_F	Forward slope resistance		190	0.0877	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, double side cooled		0.020	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, double side cooled		0.0075	°C/W
T_j	Max. junction temperature			190	°C
T_{stg}	Storage temperature			-40 ... 190	°C
M	Clamping force			24 - 27	KN
W	Weight (Approx.)			500	gm

DISSIPATION CHARACTERISTICS

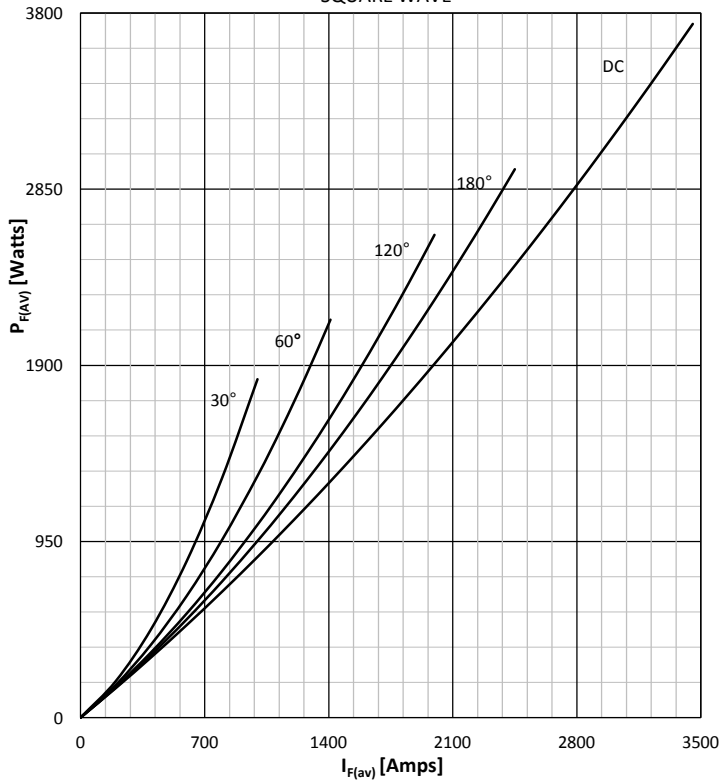
SINE WAVE


FORWARD CURRENT DERATING CURVE

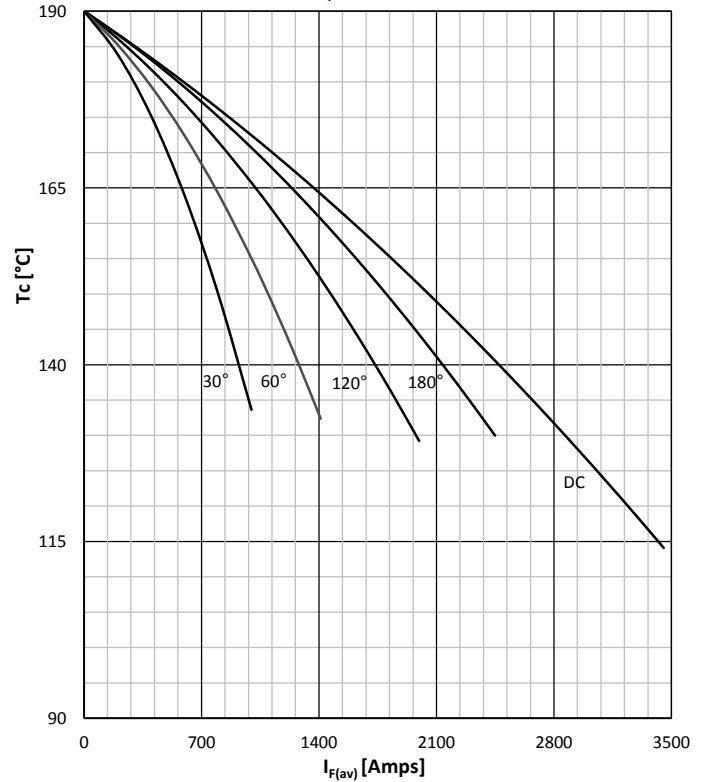
SINE WAVE

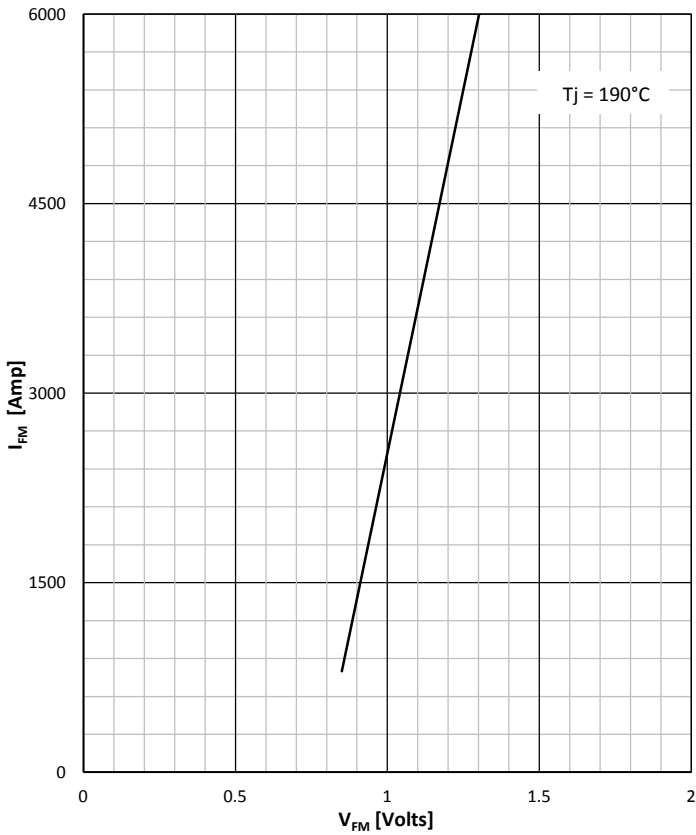
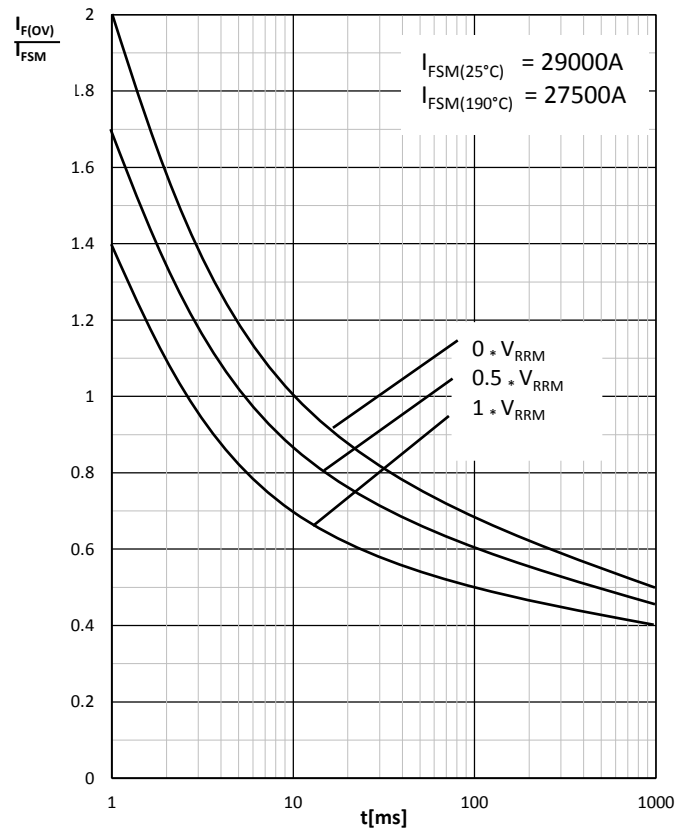

DISSIPATION CHARACTERISTICS

SQUARE WAVE


FORWARD CURRENT DERATING CURVE

SQUARE WAVE



FORWARD CHARACTERISTIC

SURGE CHARACTERISTICS

TRANSIENT THERMAL IMPEDANCE
