

## Features

- Full blocking capability over wide temperature range
- Hermetic sealed ceramic package

## Key Parameters

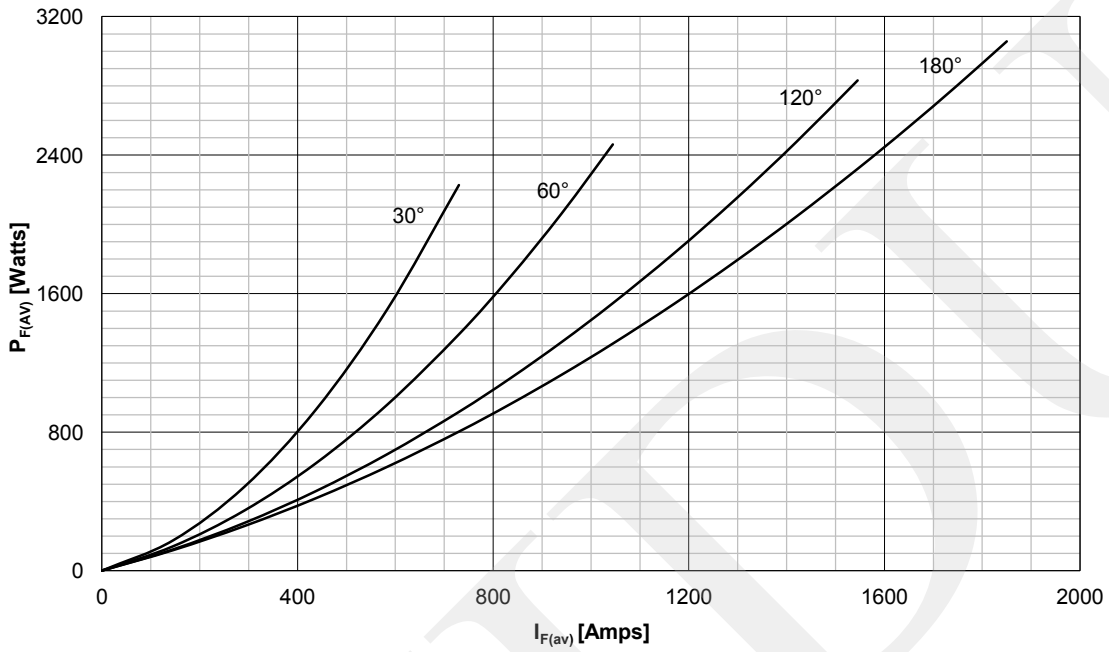
$V_{RRM}$	= 2000V
$I_{F(AV)}$	= 1850A
$I_{FSM}$	= 21.4kA
$V_{F(TO)}$	= 0.74V
$r_F$	= 0.20mΩ

## Applications

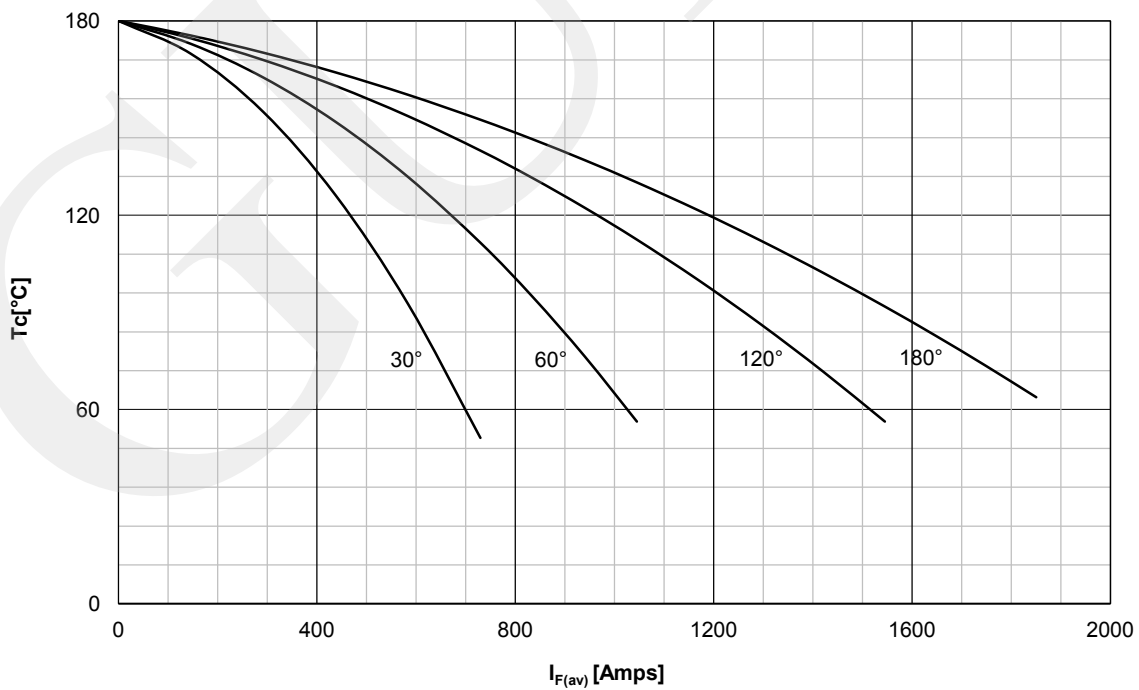
- Uncontrolled Rectifiers
- Battery Chargers
- Power Supplies

Symbol	Characteristic	Conditions	T <sub>J</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
$V_{RRM}$	Repetitive peak reverse voltage		180	200 - 2000	V
$I_{RRM}$	Repetitive peak reverse current	$V = V_{RRM}$	180	40	mA
<b>CONDUCTING</b>					
$I_{F(AV)}$	Mean Forward current	180° sin ,50 Hz, T <sub>c</sub> =63°C, Double side cooled		1850	A
$I_{FRMS}$	RMS Forward current			2905	A
$I_{FSM}$	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	21400	A
			180	20500	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	2290 x 10 <sup>3</sup>	A <sup>2</sup> s
			180	2101 x 10 <sup>3</sup>	A <sup>2</sup> s
$V_F$	Peak Forward voltage	Peak forward current = 3000A	180	1.44	V
$V_{F(TO)}$	Threshold voltage		180	0.74	V
$r_F$	Forward slope resistance		180	0.20	mΩ
<b>MOUNTING</b>					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case, Double side cooled		0.038	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, Double side cooled		0.005	°C/W
$T_j$	Max. junction temperature			180	°C
$T_{stg}$	Storage temperature			-40 .... 180	°C
M	Mounting Torque			16 - 18	kN
W	Weight (Approx.)			280	gm

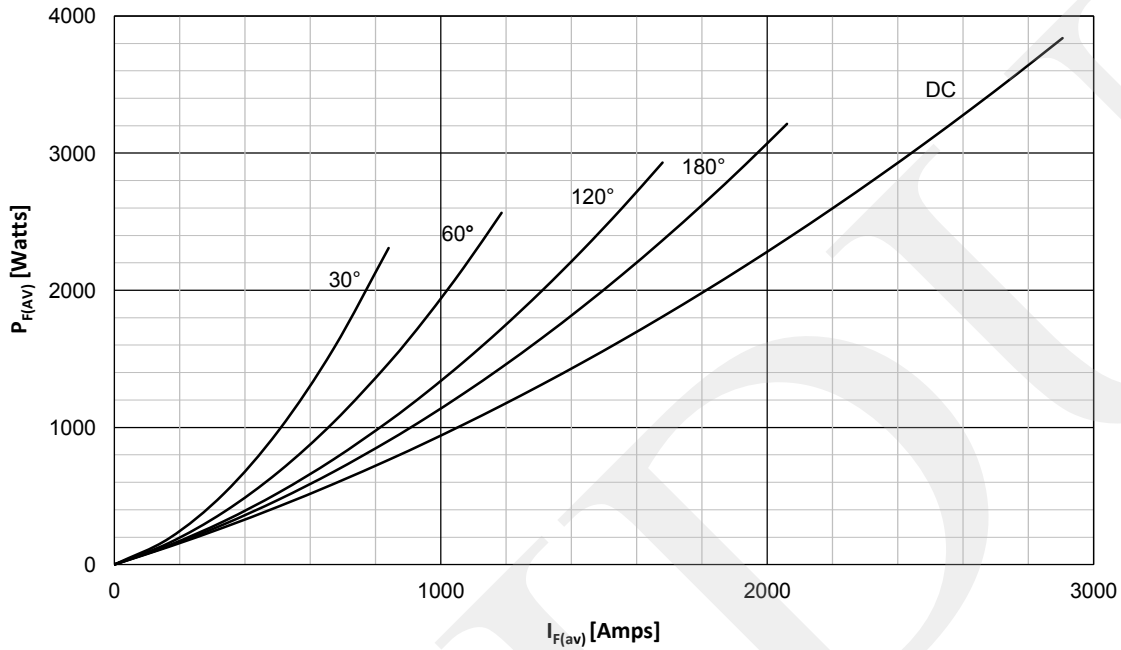
DISSIPATION CHARACTERISTICS  
SINE WAVE



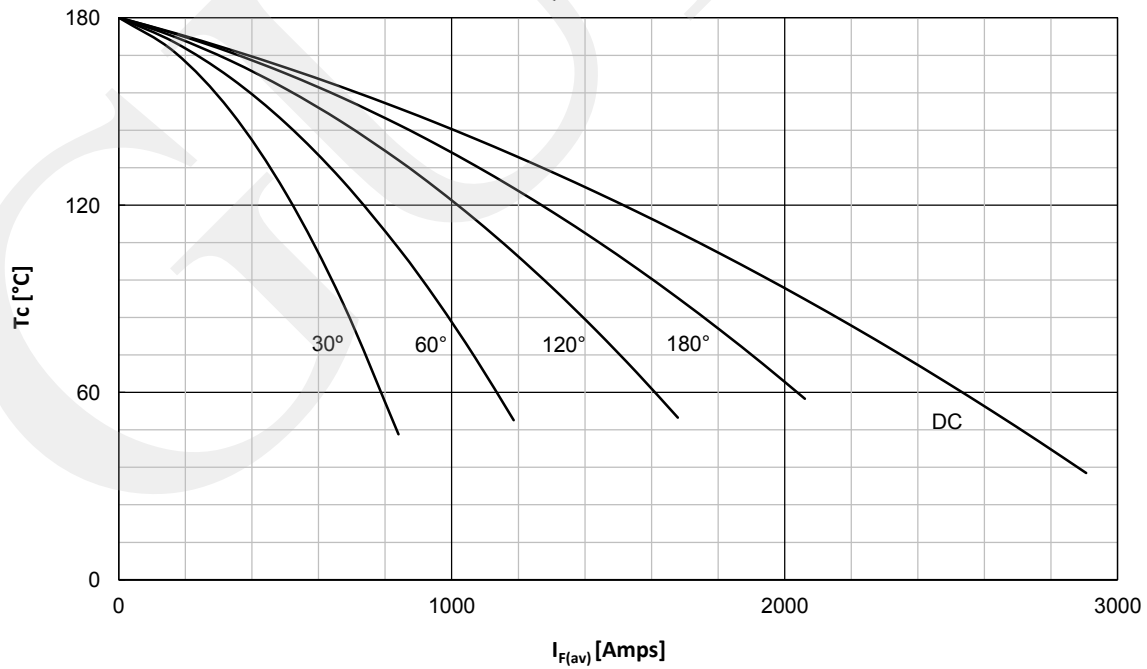
FORWARD CURRENT DERATING CURVE  
SINE WAVE



DISSIPATION CHARACTERISTICS  
SQUARE WAVE

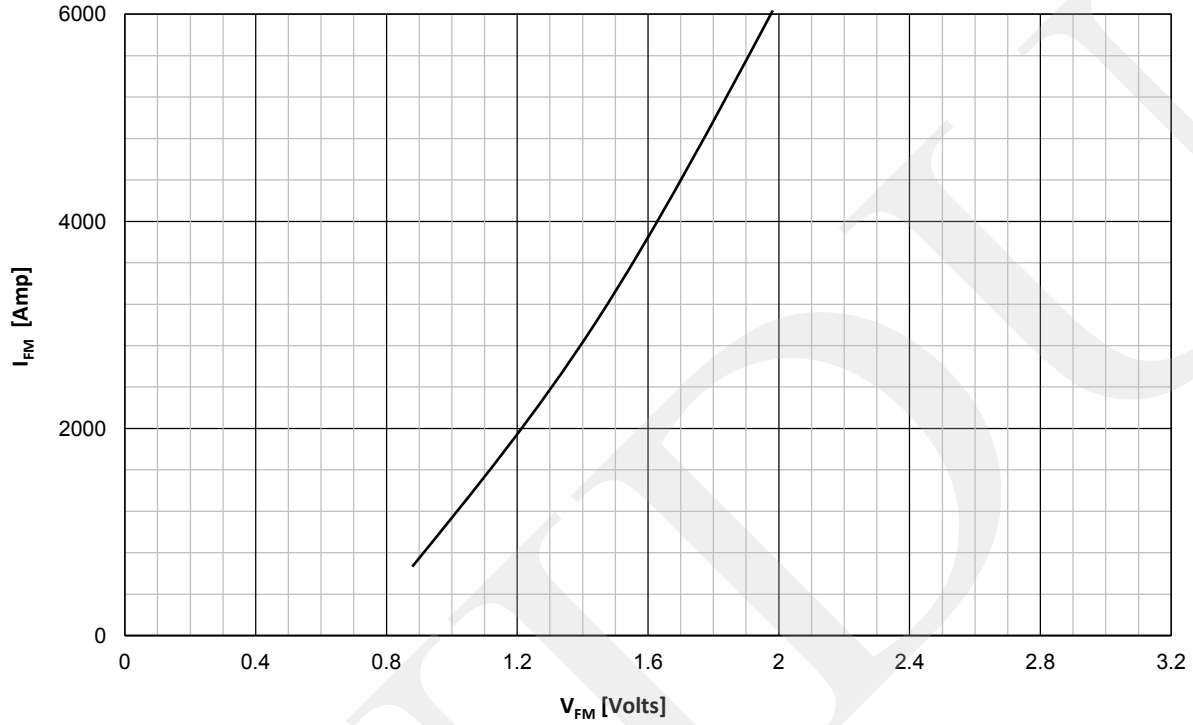


FORWARD CURRENT DERATING CURVE  
SQUARE WAVE

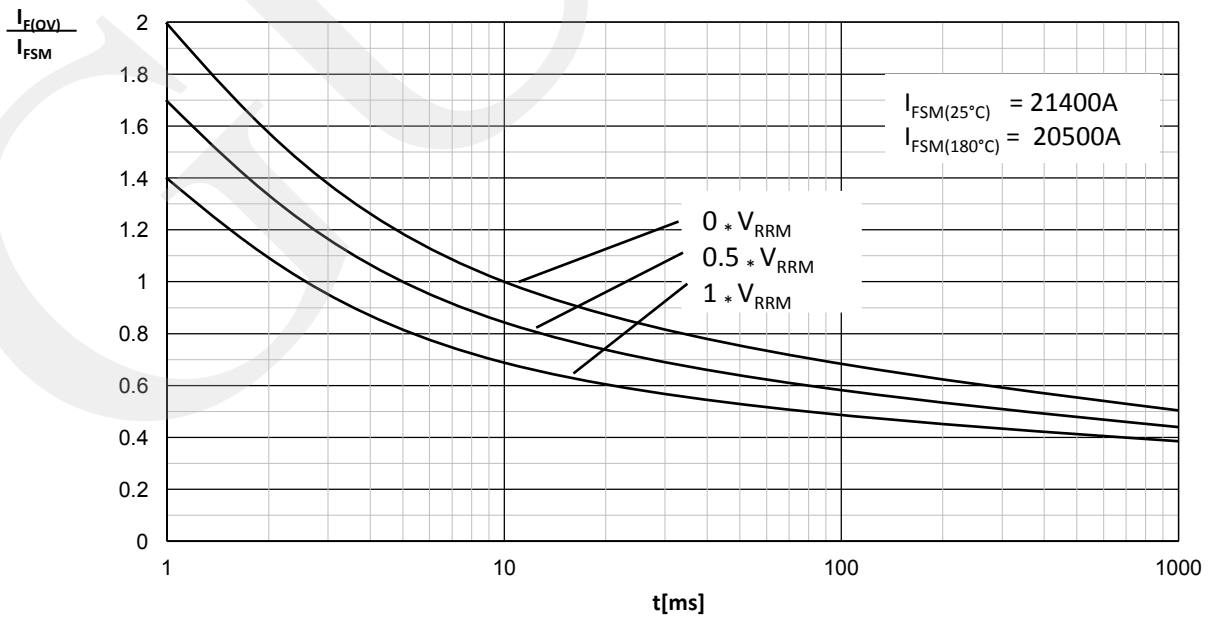


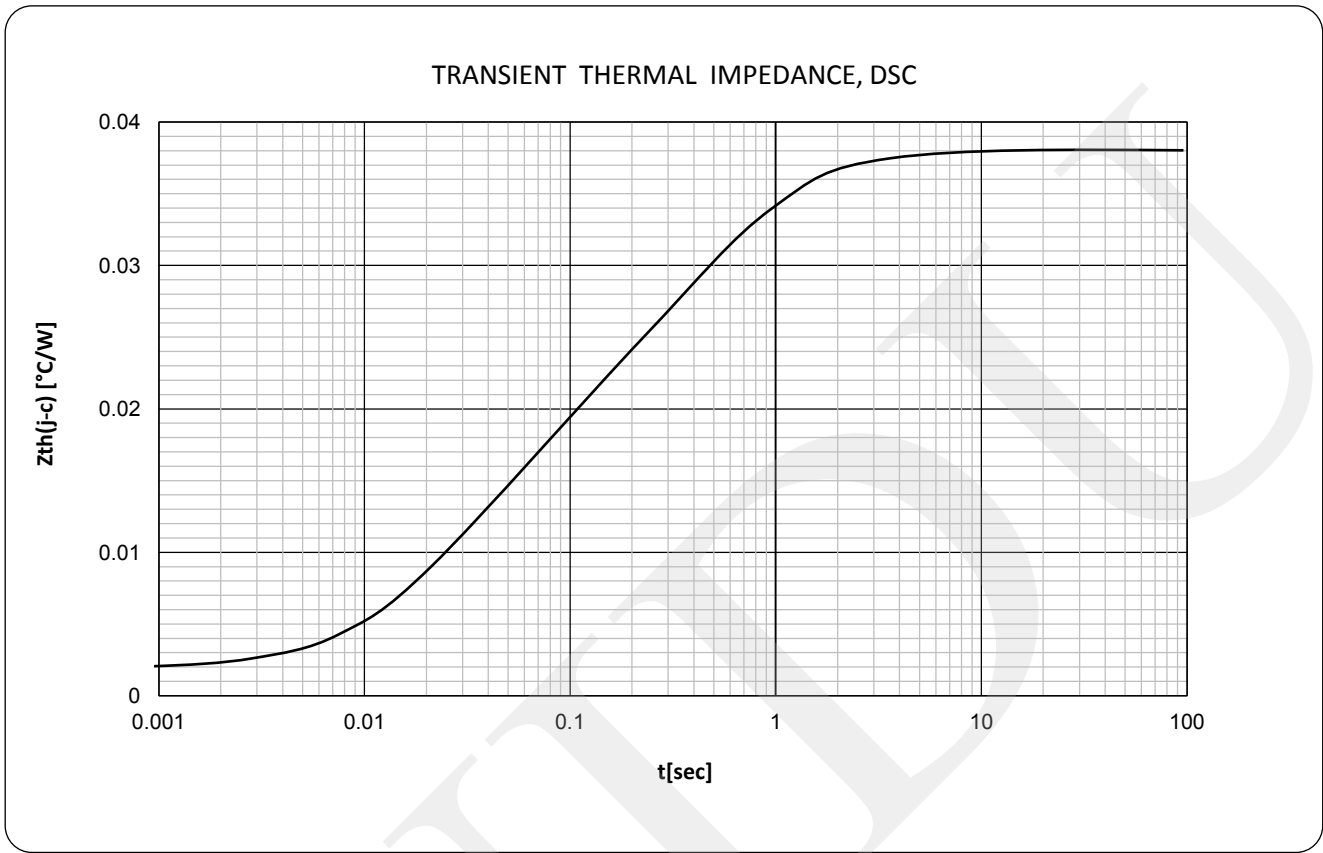
FORWARD CHARACTERISTICS

$T_j = 180^\circ\text{C}$



SURGE CHARACTERISTICS





**ORDERING INFORMATION**

<b>GDZP</b>	<b>1850</b>	<b>C</b>	<b>X X</b>
Rectifier Diode	Current code	Capsule Package	Voltage Code Code X 100 = V <sub>RRM</sub>

Order Code GDZP1850C20 – 2000V V<sub>RRM</sub>, Capsule diode

### Outline

