

Features

- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Flat round base

Applications

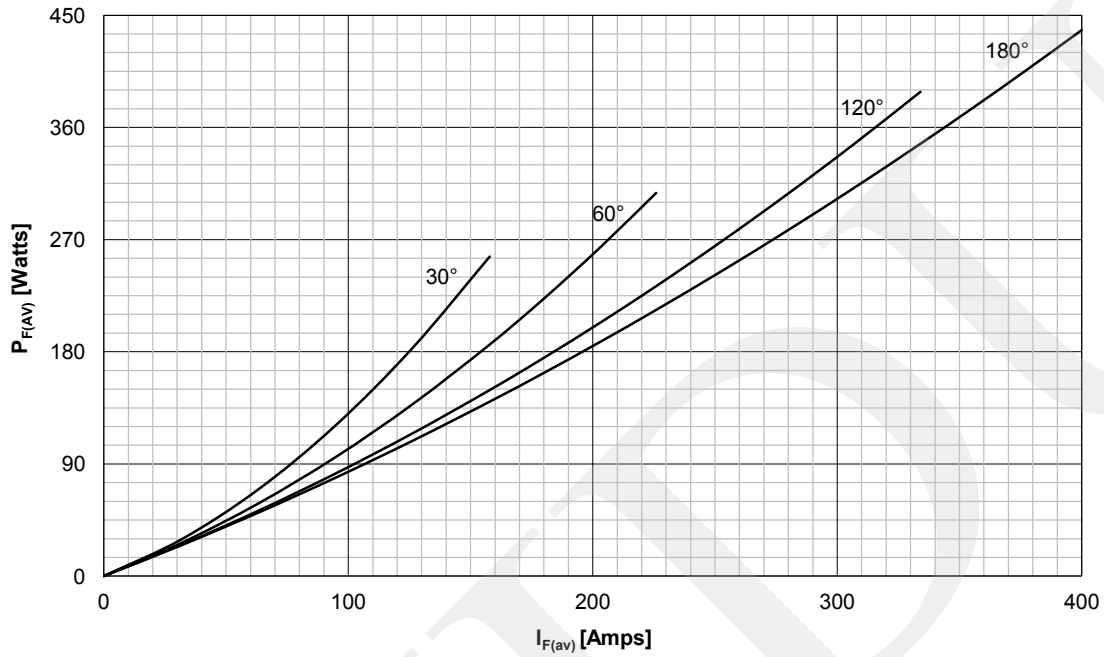
- Power Supplies
- Free-wheeling Diodes
- Uncontrolled Rectifiers

Key Parameters

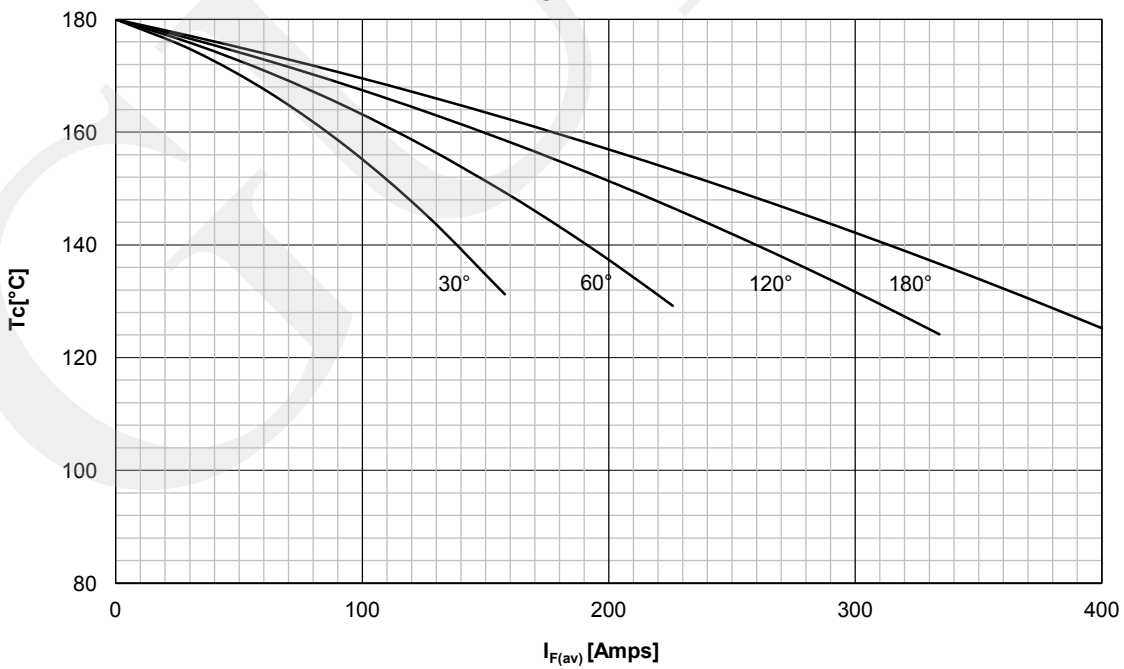
V_{RRM}	= 1600V
$I_{F(AV)}$	= 400A
I_{FSM}	= 7400A
$V_{F(TO)}$	= 0.75V
r_F	= 0.35mΩ

Symbol	Characteristic	Conditions	T _J [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		180	200 - 1600	V
I_{RRM}	Repetitive peak reverse current	$V = V_{RRM}$	180	50	mA
CONDUCTING					
$I_{F(AV)}$	Mean Forward current	180° sin ,50 Hz, T _c =125°C		400	A
I_{FRMS}	RMS Forward current			628	A
I_{FSM}	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	7400	A
			180	7000	A
$I^2 t$	$I^2 t$	Sine wave, 10 ms Without reverse voltage	25	274 x 10 ³	A ² s
			180	245 x 10 ³	A ² s
V_F	Peak Forward voltage	Peak forward current = 1050A	180	1.12	V
$V_{F(TO)}$	Threshold voltage		180	0.75	V
r_F	Forward slope resistance		180	0.35	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.125	°C/W
$R_{th(c-h)}$	Thermal impedance	Case to heatsink		0.05	°C/W
T_j	Max. junction temperature			180	°C
T_{stg}	Storage temperature			-40 180	°C
M	Mounting Torque			20	NM
W	Weight (Approx.)			250	gm

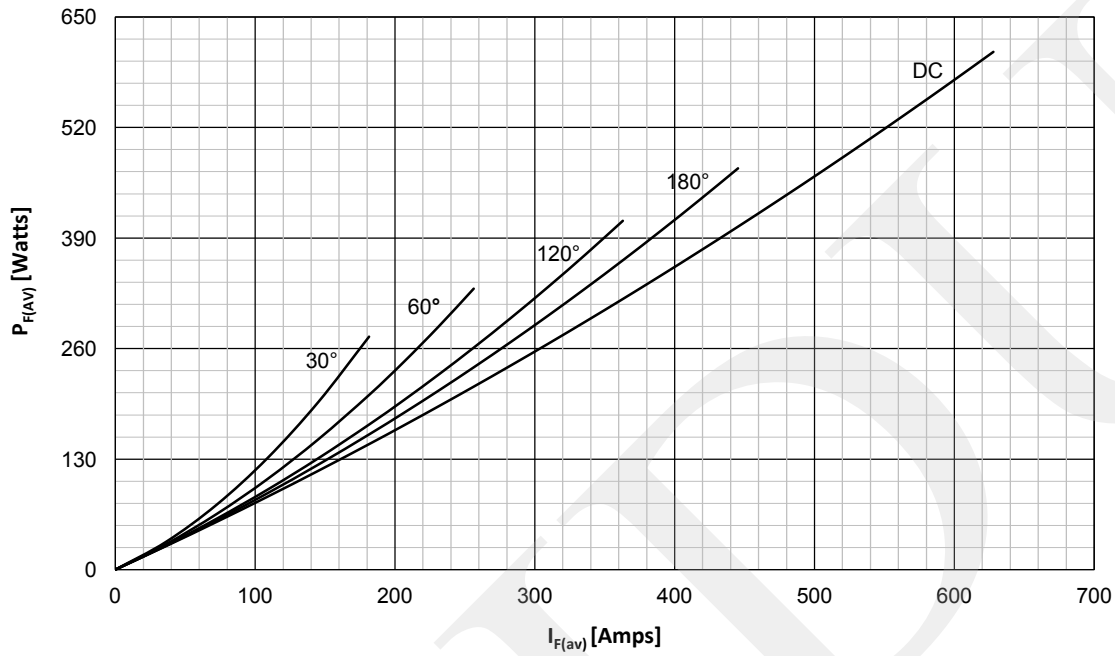
DISSIPATION CHARACTERISTICS
SINE WAVE



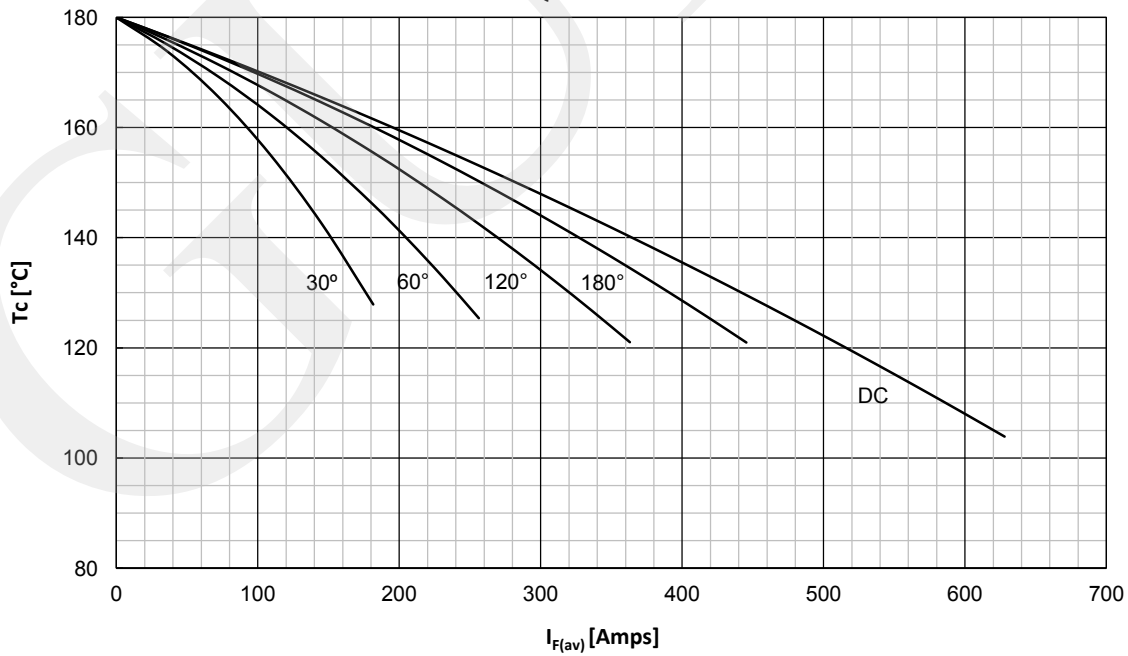
FORWARD CURRENT DERATING CURVE
SINE WAVE



DISSIPATION CHARACTERISTICS
SQUARE WAVE

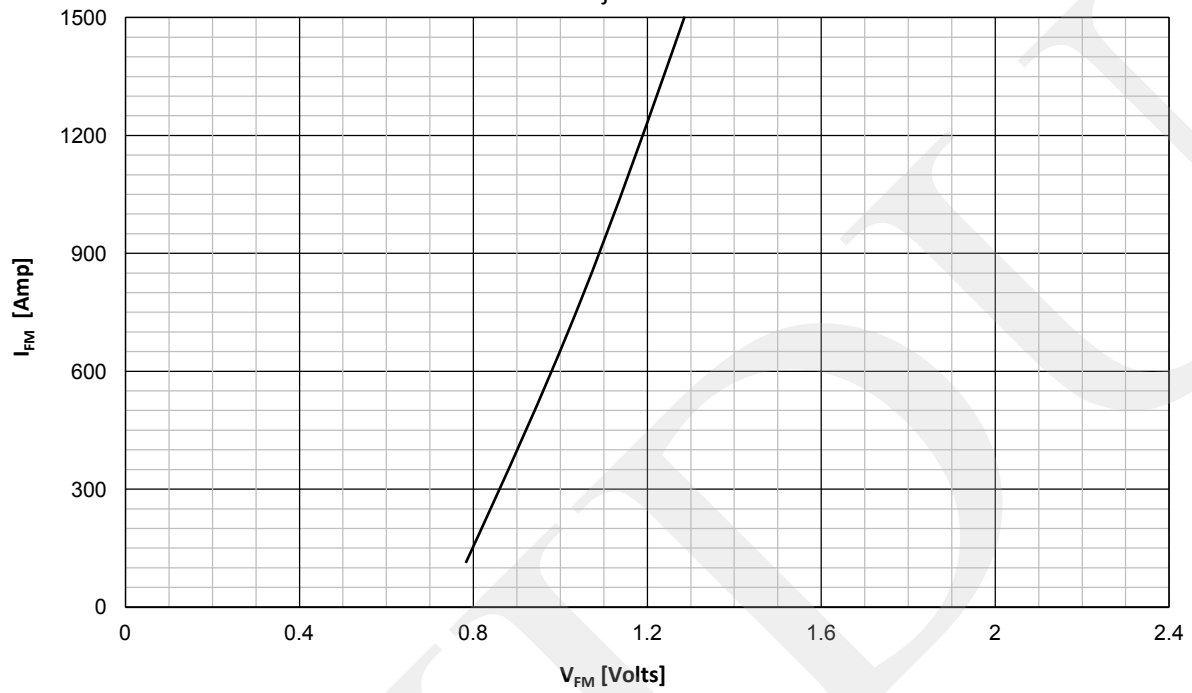


FORWARD CURRENT DERATING CURVE
SQUARE WAVE

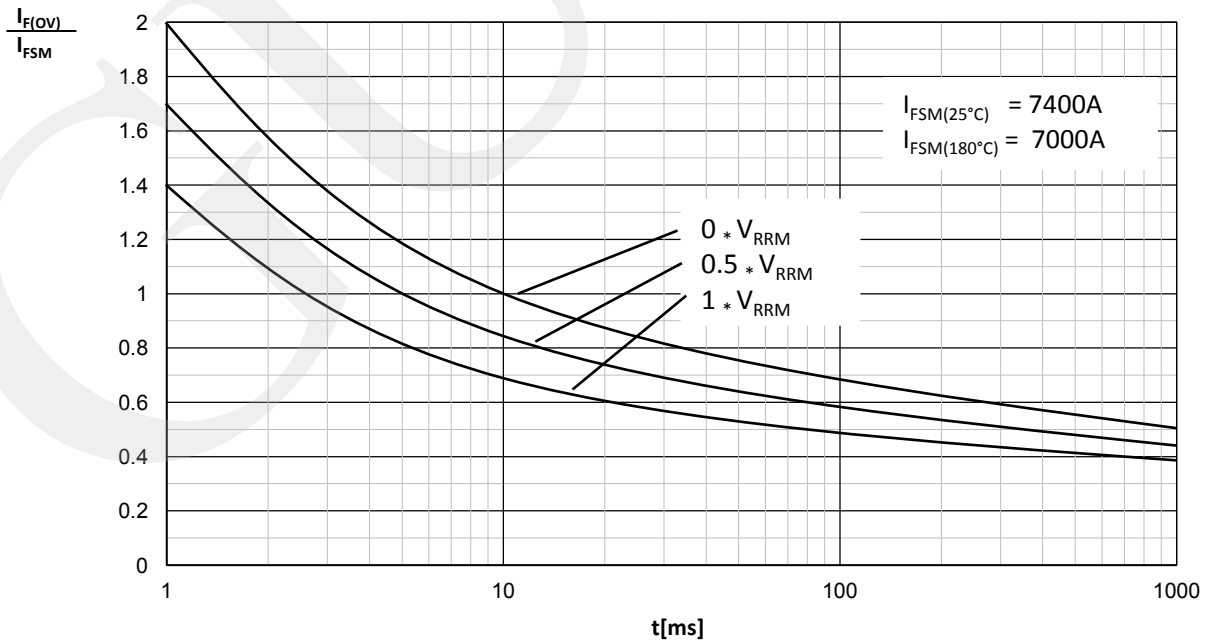


FORWARD CHARACTERISTICS

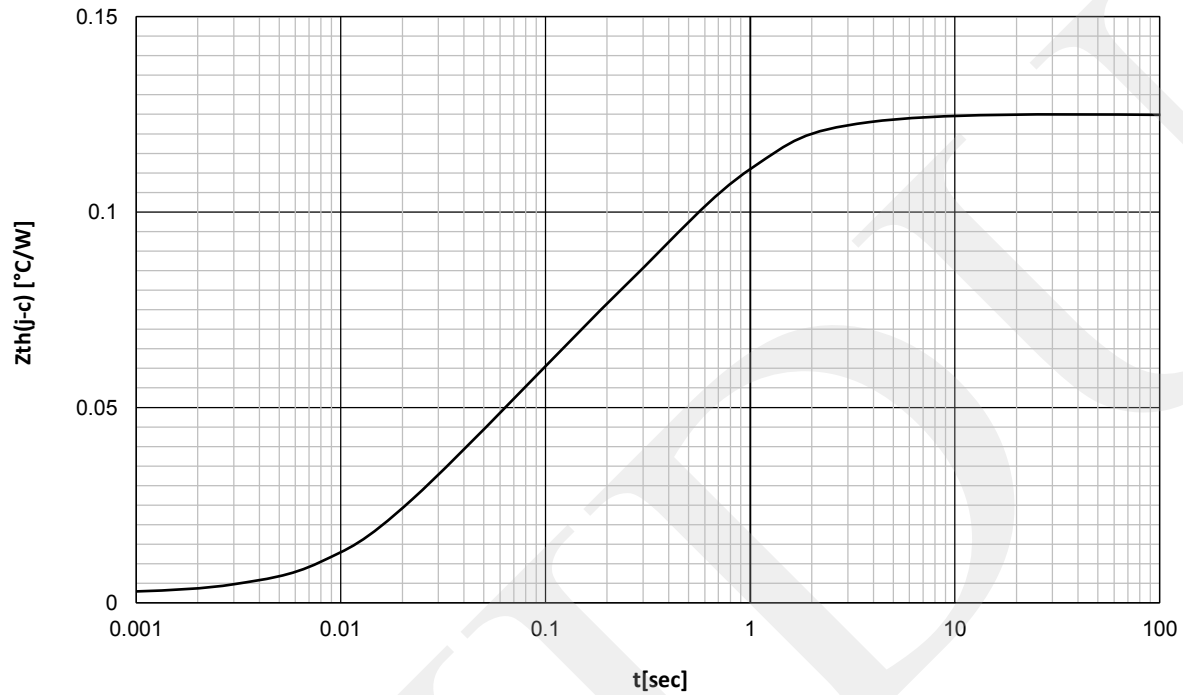
$T_j = 180^\circ\text{C}$



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



ORDERING INFORMATION

GDZP	401	N	XX	F
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = V_{RRM}	F = Flat base

Order Code GDZP401R16F – 1600V V_{RRM} , Flat base, Diode with base anode.

Outline

