RECTIFIER DIODE
GDZP150

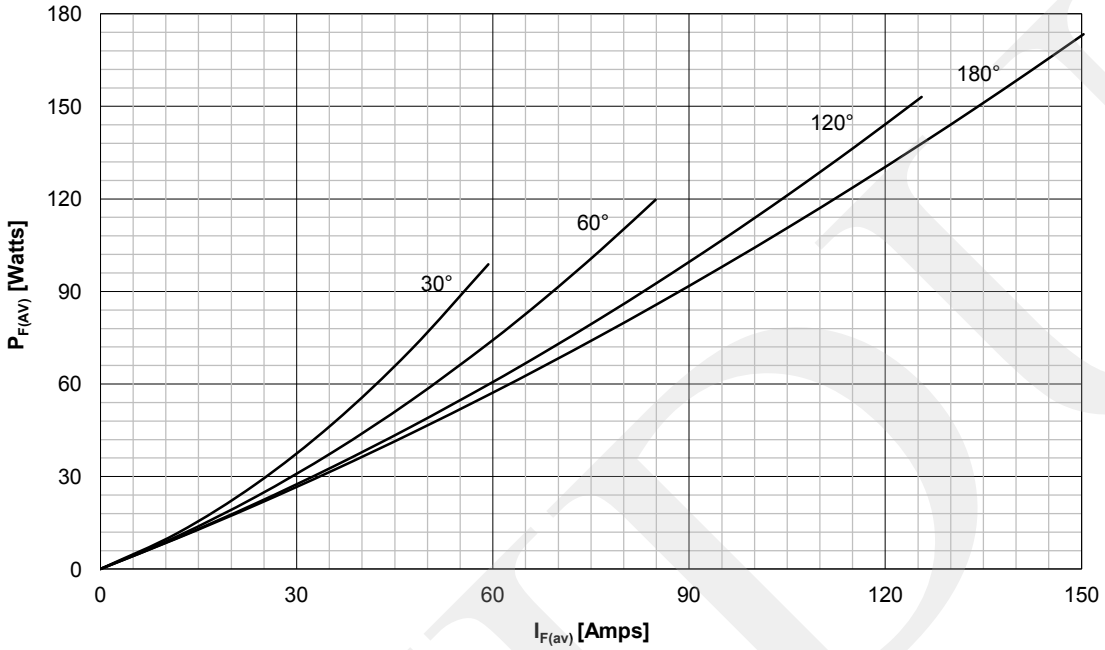
Features
- Full blocking capability over wide temperature range
- Hermetic metal case with glass insulator
- Flat round base

Key Parameters
V_{RRM} = 1600V
$I_{F(AV)}$ = 150A
I_{FSM} = 4000A
$V_{F(TO)}$ = 0.82V
r_F = 0.90mΩ

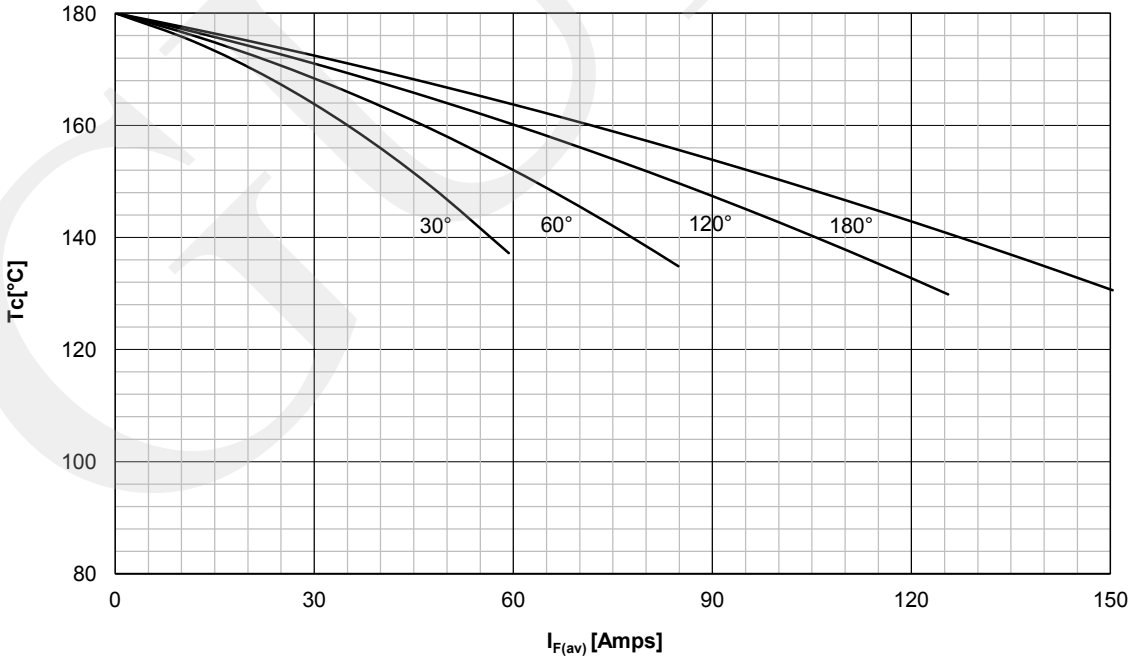
Applications
- Power Supplies
- Free-wheeling Diodes
- Uncontrolled Rectifiers

Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
BLOCKING					
V_{RRM}	Repetitive peak reverse voltage		180	200 - 1600	V
I_{RRM}	Repetitive peak reverse current	V= V_{RRM}	180	20	mA
CONDUCTING					
$I_{F(AV)}$	Mean Forward current	180° sin ,50 Hz, T_c =130°C		150	A
I_{FRMS}	RMS Forward current			235	A
I_{FSM}	Surge Forward current	Sine wave, 10 ms Without reverse voltage	25	4000	A
			180	3600	A
I^2t	I^2t	Sine wave, 10 ms Without reverse voltage	25	80000	A^2s
			180	64800	A^2s
V_F	Peak Forward voltage	Peak forward current = 470A	180	1.25	V
$V_{F(TO)}$	Threshold voltage		180	0.82	V
r_F	Forward slope resistance		180	0.90	mΩ
MOUNTING					
$R_{th(j-c)}$	Thermal impedance, sin 180°	Junction to case		0.28	°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			13 - 14	NM
W	Weight (Approx.)			160	gm

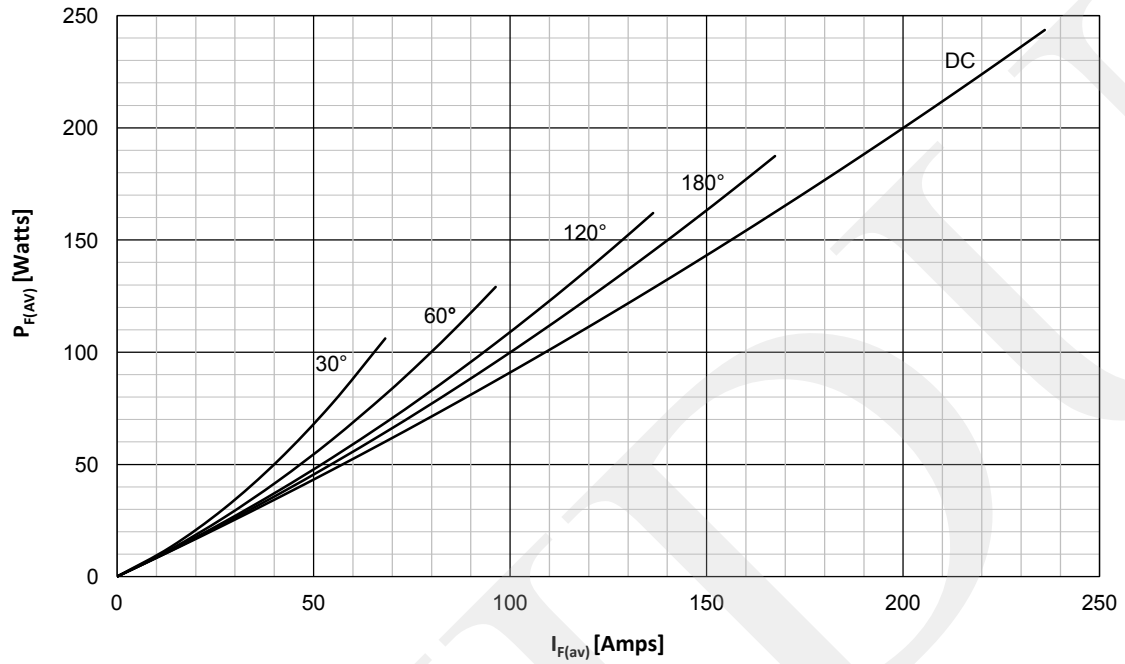
DISSIPATION CHARACTERISTICS
SINE WAVE



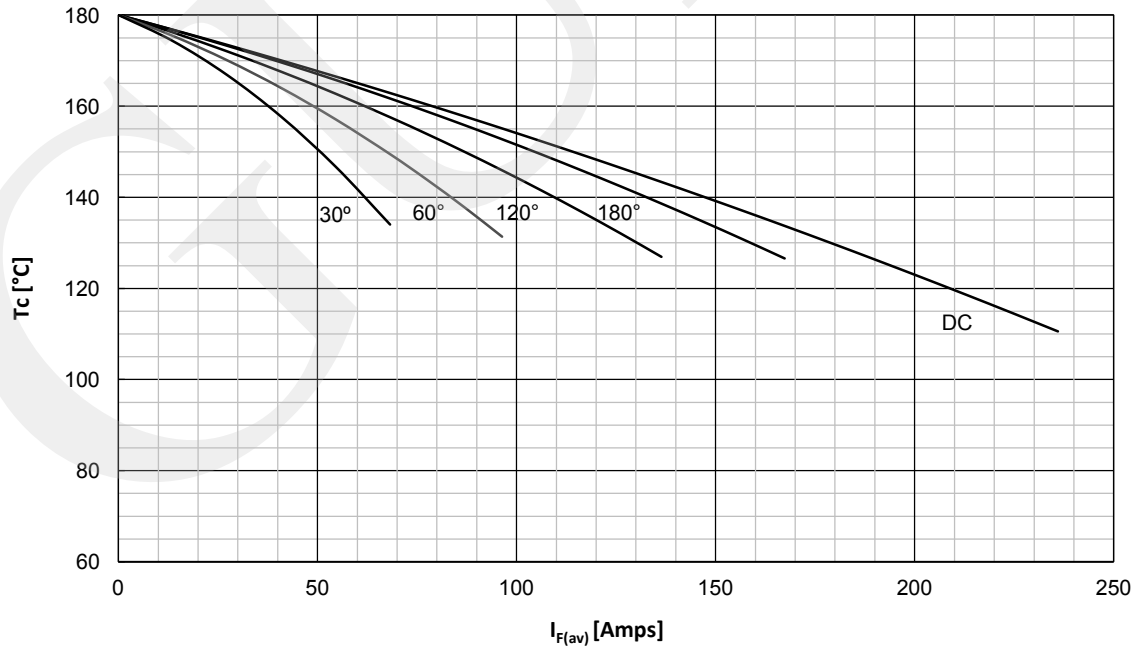
FORWARD CURRENT DERATING CURVE
SINE WAVE

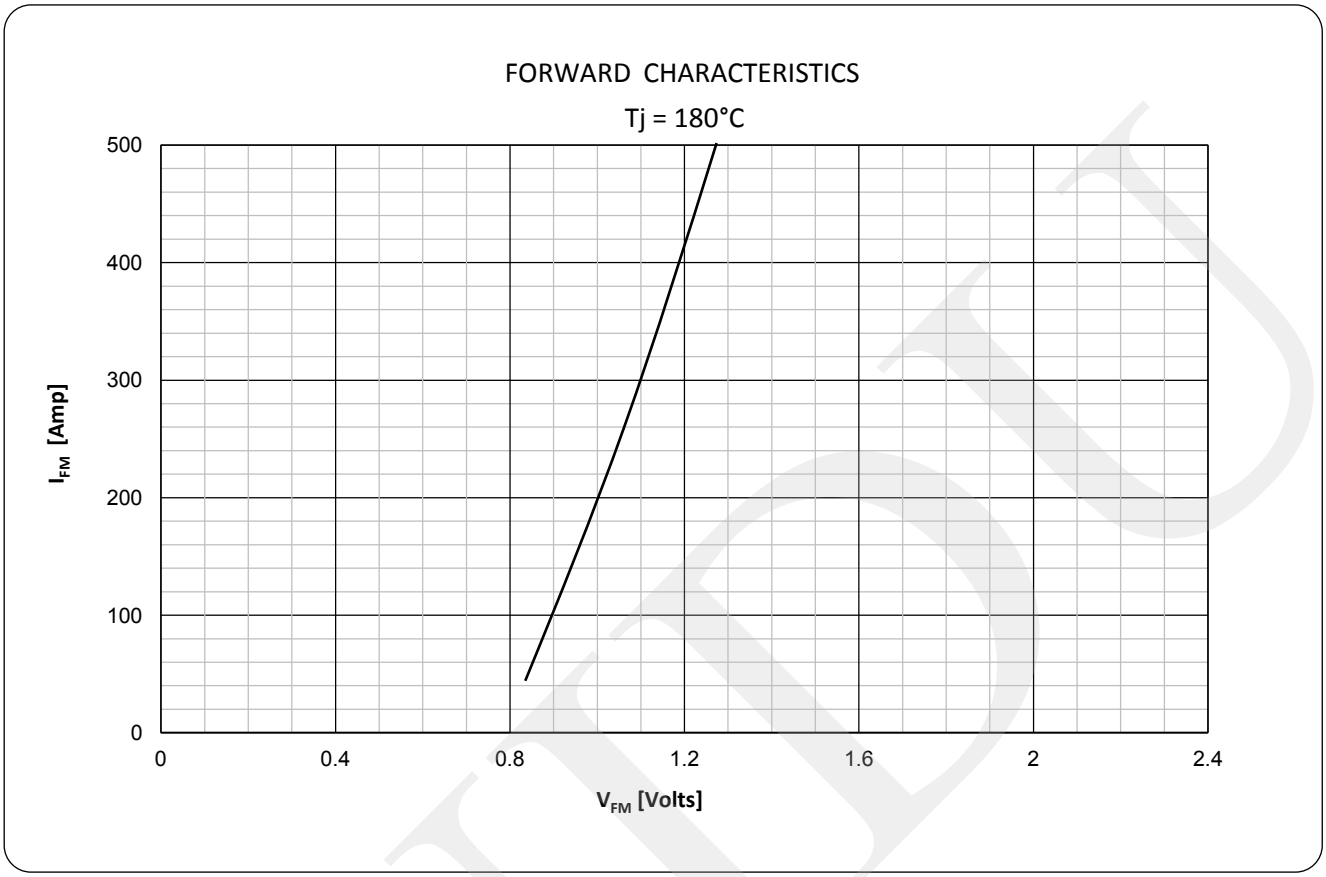


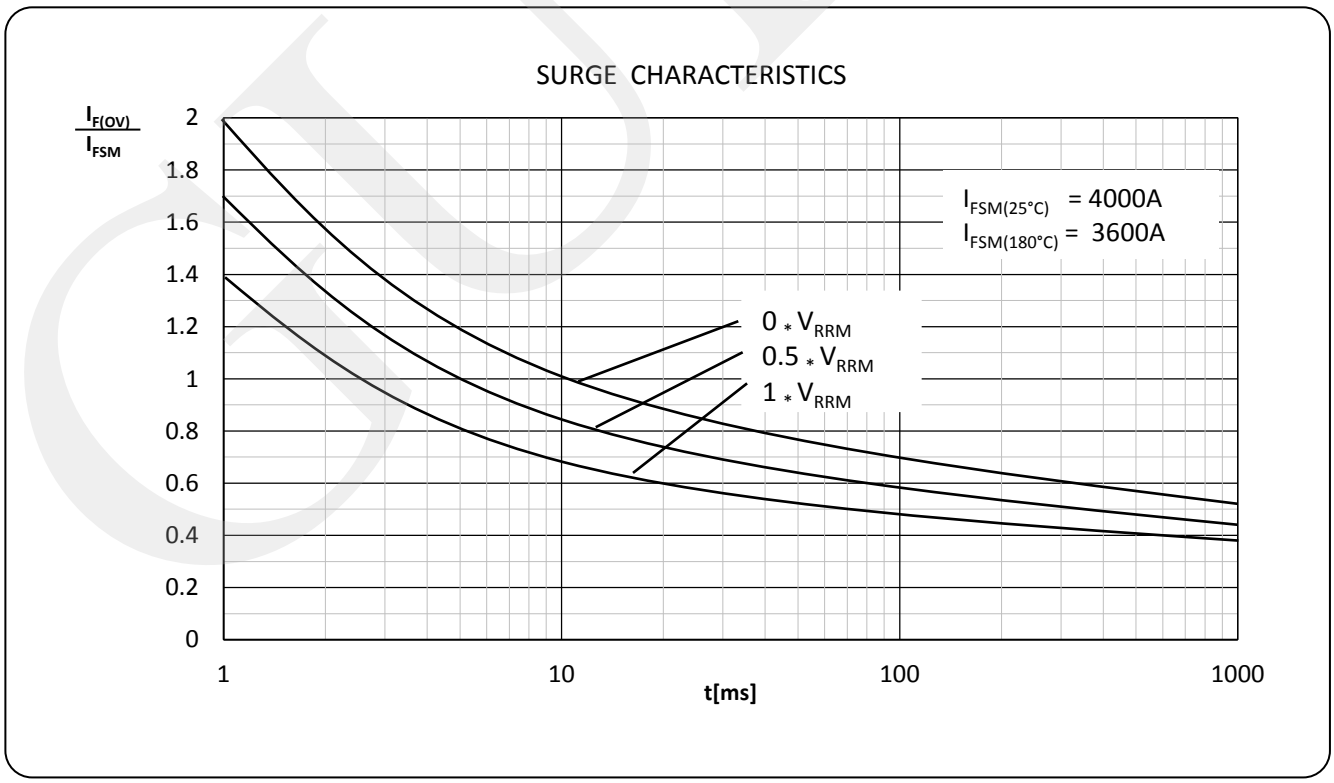
DISSIPATION CHARACTERISTICS
SQUARE WAVE

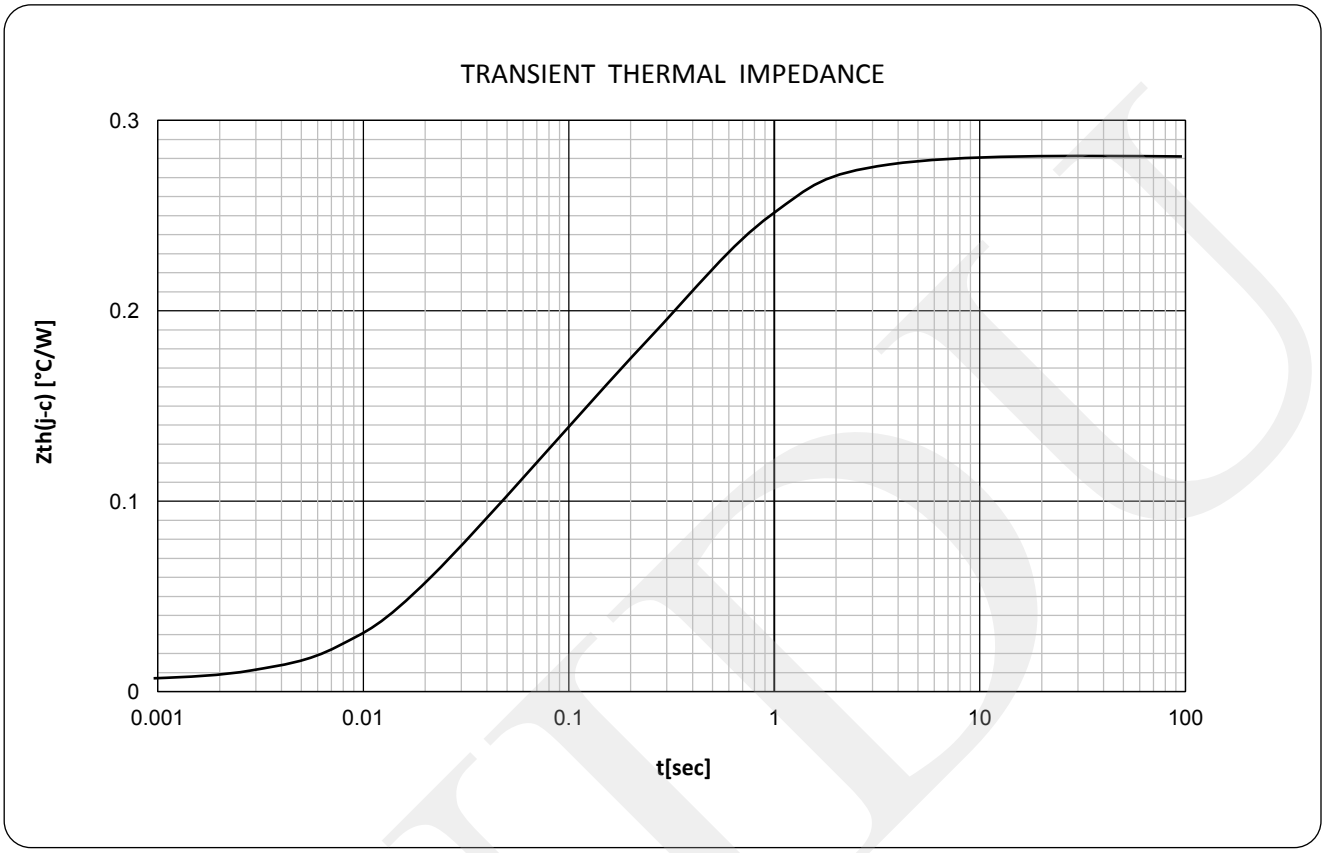


FORWARD CURRENT DERATING CURVE
SQUARE WAVE




FORWARD CHARACTERISTICS
Tj = 180°C
500
400
300
200
100
0
I_{FM} [Amp]
0
0.4
0.8
1.2
1.6
2
2.4
V_{FM} [Volts]


SURGE CHARACTERISTICS
$\frac{I_{F(OV)}}{I_{FSM}}$
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1
10
100
1000
t[ms]
$I_{FSM(25°C)}$ = 4000A
$I_{FSM(180°C)}$ = 3600A
0 * V_{RRM}
0.5 * V_{RRM}
1 * V_{RRM}

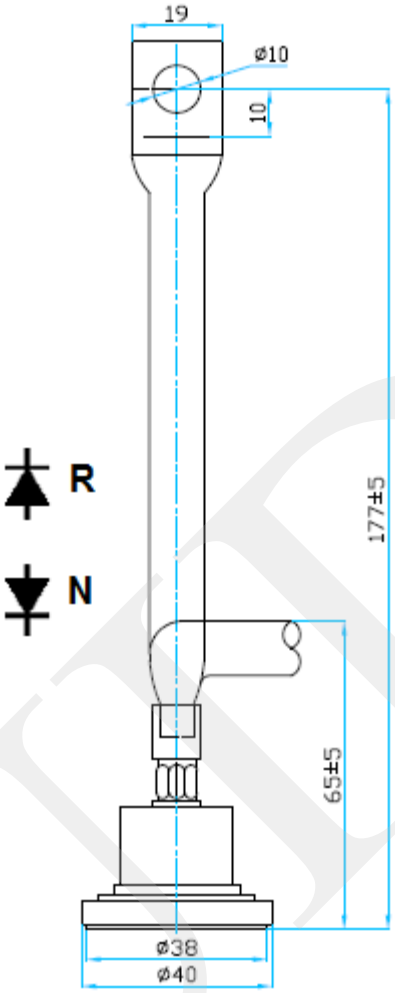


ORDERING INFORMATION

GDZP	150	N	X X	F
Rectifier Diode	Current code	Polarity R= Base Anode N= Base Cathode	Voltage Code Code X 100 = V_{RRM}	F = Flat base

Order Code GDZP150R16F – 1600V V_{RRM}, flat base, Diode with base anode.

Outline



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