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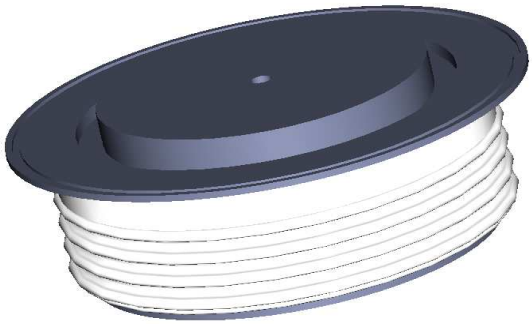

GPDP6160

RECTIFIER DIODE

VOLTAGE UP TO	**6000**	**V**
AVERAGE CURRENT	**1600**	**A**
SURGE CURRENT	**18**	**kA**

BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value	
V_{RRM}	Repetitive peak reverse voltage		6000	V
V_{RSM}	Non-repetitive peak reverse voltage		6100	V
I_{RRM}	Repetitive peak reverse current, max.	V_{RRM}, single phase, half wave, Tjmax	75	mA

FORWARD CHARACTERISTICS

$I_{F(AV)}$	Average forward current	Sine wave,180° conduction, T h = 55℃	1600	A
$I_{F(RMS)}$	R.M.S. forward current	Sine wave,180° conduction, Th = 55℃	2513	A
I_{FSM}	Surge forward current	Non rep. half sine wave, 50 Hz, V_R = 0 V, $T_j = T_{jmax}$	18	kA
I^2t	I^2 t for fusing coordination		1620	kA^2s
$V_{F(TO)}$	Threshold voltage	$T_j = T_{jmax}$	1.06	V
r_F	Forward slope resistance	$T_j = T_{jmax}$	0.390	mΩ
V_{FM}	Peak forward voltage, max	Forward current I_F = 4000 A, Tj = 25℃	2.61	V

SWITCHING CHARACTERISTICS

Q_{rr}	Rverse recovery charge, typ	$T_j = T_{jmax}$, I_F = 2000 A, di/dt = -5 A/µs		µC
I_{rr}	Reverse recovery current	V_R = 100 V		A
t_{rr}	Reverse recovery time			µs
V_{FP}	Forward recovery voltage	$T_j = T_{jmax}$, di/dt = A/µs		V

THERMAL AND MECHANICAL CHARACTERISTICS

$R_{th(j-c)}$	Thermal resistance (junction to case)	Double side cooled	0.020	℃/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Double side cooled	0.002	℃/W
T_{jmax}	Max operating junction temperature		150	℃
T_{stg}	Storage temperature		-40 / 150	℃
F	Clamping force ± 10%		22	kN
	Mass		500	g