

P S T

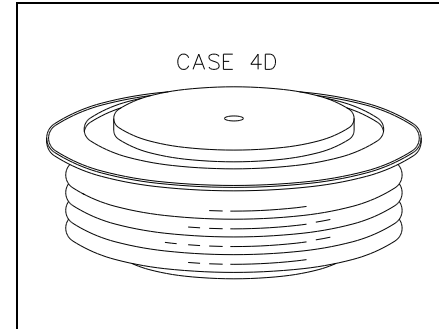
PA780 - Standard Rectifier

3600 - 4400 V_{RRM} ; 1070 A avg

GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All Diffused Structure
- . High Surge rating
- . Blocking capability up to 4400 volts
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	V_{RRM} (1)	V_{RSM} (1)
PA780CM	3600	3700
PA780CN	3800	3900
PA780DP	4000	4100
PA780DB	4200	4300
PA780DD	4400	4500

V_{RRM} = Repetitive peak reverse voltage

V_{RSM} = Non repetitive peak reverse voltage (2)

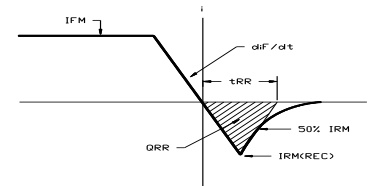
Repetitive peak reverse leakage	I_{RRM}	10 mA 50 mA (3)
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Notes:

All ratings are specified for $T_j = 25^\circ\text{C}$ unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to $+150^\circ\text{C}$.

(2) 10 msec. max. pulse width



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

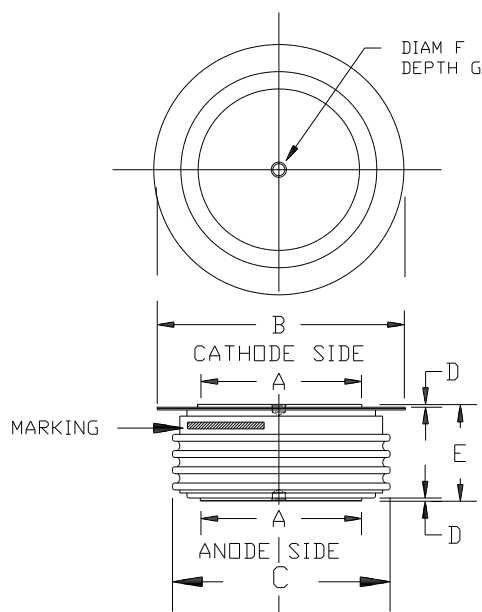
Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	$I_{F(AV)}$		1070		A	Sinewave, 180° conduction, $T_c = 100^\circ\text{C}$
RMS value of on-state current	I_{FRMS}		2200		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		19800 15500		A A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, $T_j = 150^\circ\text{C}$ 10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, $T_j = 150^\circ\text{C}$
I square t	I^2t		1960		KA^2s	8.3 msec and 10 msec
Peak on-state voltage	V_{FM}		1.25		V	$I_{FM} = 1000$ A; Duty cycle $\leq 0.01\%$; $T_j = 25^\circ\text{C}$
Reverse Recovery Current (4)	$I_{RM(REC)}$		250		A	$I_{FM} = 1000$ A; $dI_F/dt = 10$ A/ μs , $T_j = 150^\circ\text{C}$
Reverse Recovery Charge (4)	Q_{rr}		*		μC	
Reverse Recovery Time (4)	t_{RR}		5		μs	$I_{FM} = 1000$ A; $dI_F/dt = 100$ A/ μs

* For guaranteed maximum values, contact factory

Parameter	Symb ol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+150		°C	
Storage temperature	T_{stg}	-40	+150		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.023		°C/W	Double sided cooled
Thermal resistance - case to sink	$R_{\theta(c-s)}$		.010		°C/W	Double sided cooled *
Mounting force	P	5000 22.3	6000 26.7		lb. kN	
Weight	W			460	g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



OUTLINE DIMENSIONS - CASE 4D				
DIMENSIONS	Min. mm	Max. mm	Min. In.	Max. In.
DIAM A	43.18	48.26	1.70	1.90
DIAM B	63.50	75.18	2.50	2.96
DIAM C	--	67.31	--	2.65
D	0.76	--	0.03	--
E	25.40	27.18	1.00	1.07
F	3.30	3.81	0.13	0.15
G	1.78	2.03	0.07	0.08

STRIKE DISTANCE = .73 INCH / 18.5 MM MIN.
CREEPAGE DISTANCE = 1.17 INCH / 29.7 MM MIN.

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