

FAST RECOVERY RECTIFIER

ELECTRO POWER

MEP1494NC180 - Fast Recovery Rectifier

Features:

- . All Diffused Structure
- . High Surge rating
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

Typical Applications:

- . Rectifier for Drives Applications
- . Medium voltage converters
- . Pulsed power applications
- . Crowbar Applications

ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

V_{RRM} (1)	V_{RSM} (1)
1800	1900

V_{RRM} = Repetitive peak reverse voltage

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

Repetitive peak reverse leakage	I_{RRM}	5 mA 85 mA
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Notes:

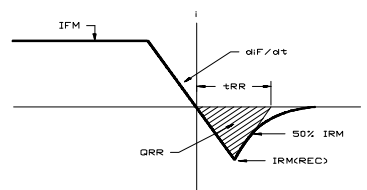
All ratings are specified for $T_j=25^\circ\text{C}$ unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to $+160^\circ\text{C}$.

(2) 10 msec. max. pulse width

(3) Maximum value for $T_j = 160^\circ\text{C}$.

(4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

Conducting - on state

Parameter	Symbol	Min	Max.	Typ	Units	Conditions
Max. Average value of on-state current	$I_{F(AV)M}$		1494		A	Sinewave, 180° conduction, $T_c=55^\circ\text{C}$
RMS value of on-state current	$I_{F(RMS)M}$		2982		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{FSM}		19.6		kA	$T_j=25^\circ\text{C}$, $V_R=0.6V_{RRM}$, $t_p=10\text{ms}$
I square t	I^2t		1920		kA^2s	10 msec
Peak on-state voltage	V_F		1.85		V	$I_F = 3000\text{ A}$; $T_j = 125^\circ\text{C}$
Reverse Recovery Current (4)	$I_{RM(REC)}$		-	140	A	$I_{FM} = 800\text{ A}$; $dI_F/dt = 50\text{ A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$
Reverse Recovery Charge (4)	Q_{rr}		-	815	μC	
Reverse Recovery Time (4)	t_{RR}		-	3.9	μs	

* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+125		$^\circ\text{C}$	
Storage temperature	T_{stg}	-55	+150		$^\circ\text{C}$	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.022		$^\circ\text{C}/\text{W}$	
Thermal resistance - case to sink	$R_{\theta(c-s)}$		0.044		$^\circ\text{C}/\text{W}$	

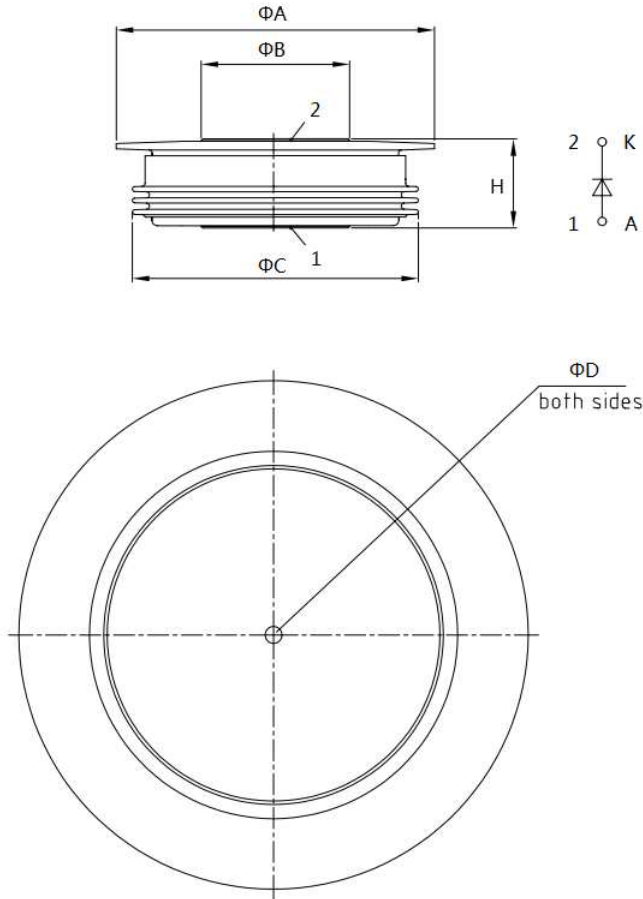
MEP1494LX180

2 / 2

Thermal resistance - junction to sink	$R_{\theta(j-s)}$		-		$^{\circ}\text{C/W}$	
Mounting force	P	19	26		kN	
Weight	W			510	g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



Sym	A	B	C	D	H
mm	75	47	66	3.5×3	26±1