

**Fast Recovery Diode Stud**
**ZPK20A-1800V**
**Forward Conduction**

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Repetitive peak reverse voltage	$V_{RRM}$			1800	V	
Non repetitive peak reverse voltage	$V_{RSM}$			1900	V	
Max. average forward current	$I_{F(AV)}$			20	A	Sinewave, 180° conduction, $T_c=100^\circ\text{C}$
Max. RMS forward current	$I_{F(RMS)}$			33	A	Nominal value; $T_c=100^\circ\text{C}$
Max. peak, one-cycle forward, non-repetitive surge current	$I_{FSM}$			0.3	kA	10.0 msec (50Hz), half sinewave, $T_{vj} = T_{vj} \text{ max}$ , $V_{RM} = 0.6V_{RRM}$
Maximum $I^2t$ for fusing	$I^2t$			4.9	$\text{kA}^2\text{s}$	
Max. forward voltage drop	$V_F$			2.15	V	$I_F = 650\text{A}$ ; $T_{vj} = T_{vj} \text{ max}$
Threshold voltage	$V_{TO}$			1.1	V	$I_F < 500\text{A}$
Slope resistance	$r_T$			1.5	$\text{m}\Omega$	

**Thermal and Mechanical Specifications**

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Repetitive peak reverse leakage and off state	$I_{RRM}$		70		mA	$T_{vj} = T_{vj} \text{ max}$
Operating temperature	$T_j$	-40	+140		$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-40	+150		$^\circ\text{C}$	
Maximum Reverse Recovery Time	$T_{rr}$			2.2	$\mu\text{s}$	
Reverse recovery charge	$Q_{rr}$			870	$\mu\text{Ac}$	
Thermal resistance - junction to case	$R_{\Theta(j-c)}$		-	0.26	$^\circ\text{C/W}$	
Thermal resistance - case to heatsink	$R_{\Theta(c-s)}$		-	0.04	$^\circ\text{C/W}$	
Mounting force	P			20	Nm	$\pm 20\%$
Weight	W	-	-	-	g	About
Case style				-		See Outline Table

CASE OUTLINE AND DIMENSIONS

