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## 2 Maximum ratings

**Table 3** Maximum ratings

Parameter	Symbol	Values			Unit	Note/Test Condition
		Min.	Typ.	Max.		
Continuous forward current <sup>1)</sup>	$I_F$	–	–	16	A	$T_C < 120^\circ\text{C}$ , $D=1$
Surge non-repetitive forward current, sine halfwave <sup>1)</sup>	$I_{F,SM}$	–	–	95		$T_C = 25^\circ\text{C}$ , $t_p=10\text{ ms}$
		–	–	74		$T_C = 150^\circ\text{C}$ , $t_p=10\text{ ms}$
Non-repetitive peak forward current <sup>1)</sup>	$I_{F,max}$	–	–	637		$T_C = 25^\circ\text{C}$ , $t_p=10\text{ }\mu\text{s}$
$i^2t$ value <sup>1)</sup>	$\int i^2 dt$	–	–	45	A <sup>2</sup> s	$T_C = 25^\circ\text{C}$ , $t_p=10\text{ ms}$
		–	–	28		$T_C = 150^\circ\text{C}$ , $t_p=10\text{ ms}$
Repetitive peak reverse voltage	$V_{RRM}$	–	–	650	V	$T_j = 25^\circ\text{C}$
Diode dv/dt ruggedness	$dv/dt$	–	–	100	V/ns	$V_R=0..480\text{ V}$
Power dissipation <sup>2)</sup>	$P_{tot}$	–	–	188	W	$T_C = 25^\circ\text{C}$
Operating and storage temperature	$T_j, T_{stg}$	-55	–	175	°C	
Mounting torque		–	50	70	Ncm	M3 screws

## 3 Thermal characteristics

**Table 4** Thermal characteristics TO-247-3

Parameter	Symbol	Values			Unit	Note/Test Condition
		Min.	Typ.	Max.		
Thermal resistance, junction-case <sup>1)</sup>	$R_{thJC}$	–	1.2	1.6	K/W	lead
Thermal resistance, junction-ambient <sup>1)</sup>	$R_{thJA}$	–	–	62		
Soldering temperature, wavesoldering only allowed at leads	$T_{sold}$	–	–	260	°C	1.6mm (0.063 in.) from case for 10 s

1) Per Leg

2) Per Device