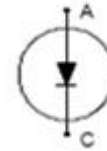
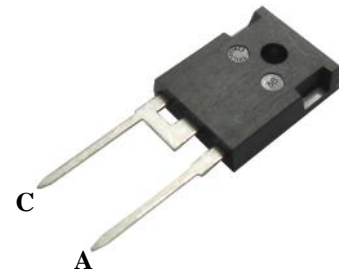


Fast Recovery 30A, 600V Diodes in TO247 B1 version
APPLICATIONS

- Switch mode power supplies (SMPS) rectifiers
- Resonant applications
- Industrial drives


FEATURES

- Fast recovery
- Soft switching
- Low reverse recovery charge
- Low forward voltage drop
- Low leakage current
- Pb-free finished; **RoHS compliant**


MAXIMUM RATINGS

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current $T_C = 25^\circ\text{C}$ $T_C = 90^\circ\text{C}$	I_F	50 30	A
Surge non-repetitive forward current $T_C = 25^\circ\text{C}$, $t_p = 10$ ms, sine halfwave	I_{FSM}	117	
Maximum repetitive forward current $T_C = 25^\circ\text{C}$, t_p limited by T_{jmax} , $D = 0.5$	I_{FRM}	81	
Soldering temperature Wave soldering, 1.6 mm (0.063 in.) from case for 10s	T_S	260	$^\circ\text{C}$
Operating junction and storage temperature	T_j, T_{stg}	-55... +150	$^\circ\text{C}$

Thermal Characteristics

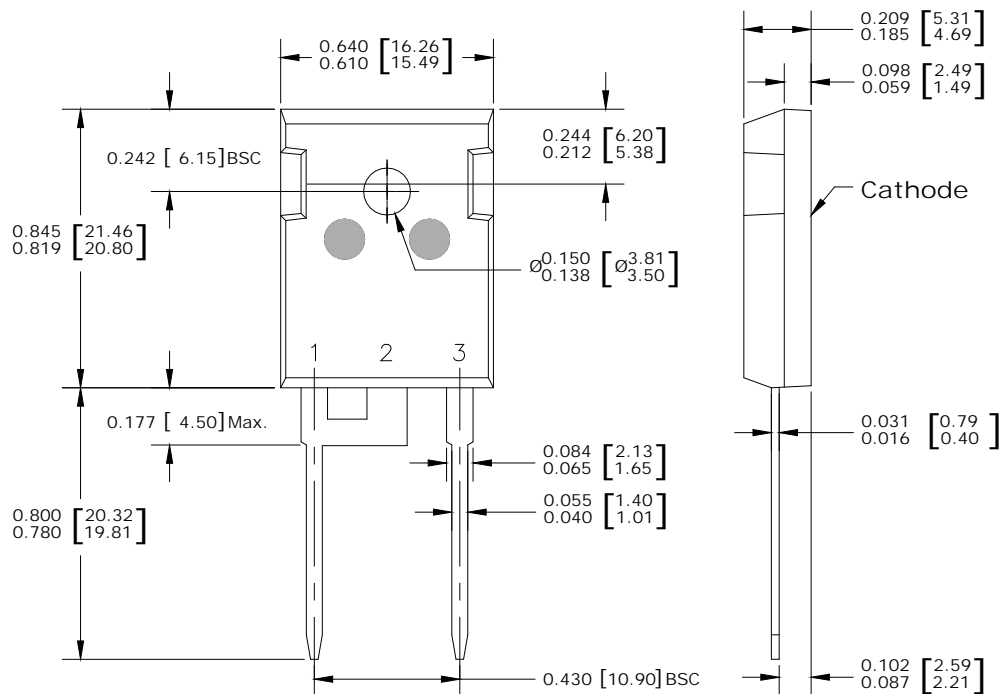
Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	1.05	$^\circ\text{C}/\text{W}$

Electrical Characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 600\text{V}$, $T_j = 25^\circ\text{C}$ $V_R = 600\text{V}$, $T_j = 175^\circ\text{C}$	I_R	- -	- -	50 2500	μA
Forward voltage drop $I_F = 30\text{A}$, $T_j = 25^\circ\text{C}$ $I_F = 30\text{A}$, $T_j = 175^\circ\text{C}$	V_F	- -	1.5 1.5	2.0 -	V

Electrical Characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 175^\circ\text{C}$	t_{rr}	- - -	126 171 178	- - -	ns
Peak reverse current $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 175^\circ\text{C}$	I_{rrm}	- - -	19 22 24	- - -	A
Reverse recovery charge $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 175^\circ\text{C}$	Q_{rr}	- - -	1100 1950 2150	- - -	nC
Peak rate of fall of reverse recovery current during t_b $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 30\text{A}$, $di_F/dt = 1000\text{A}/\mu\text{s}$, $T_j = 175^\circ\text{C}$	dl_{rr}/dt	- - -	4.0 4.6 4.8	- - -	A/ μs

Package Outline Drawing

Disclaimer

These specifications may not be considered as a guarantee of components characteristics. Components have to be tested depending on intended application as adjustments may be necessary. The use of **iQXPRZ Power Inc.** components in life support appliances and systems are subject to written approval of **iQXPRZ Power Inc.**