

Hyper Fast Recovery 8A, 600V Epitaxial Diodes, in TO247 Package

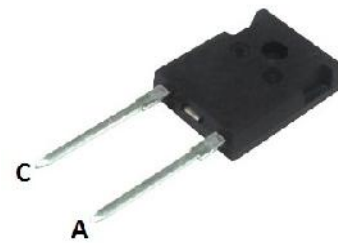
APPLICATIONS

- Freewheeling diode (FWD)
- Snubber diode
- Clamp diode
- Power factor correction (PFC)
- Plating power supply
- Ultrasonic cleaner and welder
- Converter and chopper
- Uninterruptible power supplies
- High speed rectifiers
- Inductive heating and melting applications



FEATURES

- Ultrafast recovery time
- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- High surge current capability
- Low leakage current
- Pb-free finished; **RoHS compliant**



MAXIMUM RATINGS, at $T_c = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current $T_c = 110^\circ\text{C}$	I_F	8	A
Surge non-repetitive forward current $T_j = 45^\circ\text{C}$, $t_p = 10$ ms, 50Hz, Sine	I_{FSM}	110	
Power dissipation	P_D	50	W
Operating junction and storage temperature	T_j, T_{stg}	-40... +150	$^\circ\text{C}$

Thermal Characteristics

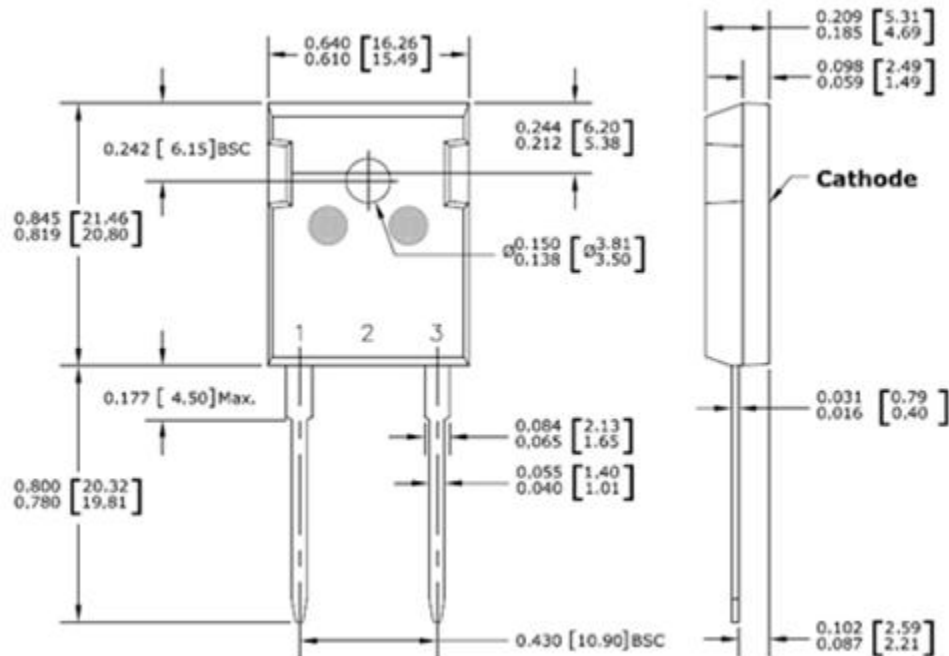
Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	2.5	$^\circ\text{C}/\text{W}$

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 600\text{V}$ $V_R = 600\text{V}$, $T_j = 125^\circ\text{C}$	I_R	-	-	15 250	μA
Forward voltage drop $I_F = 8\text{A}$	V_F	-	2.20	2.45	V

Electrical Characteristics, at $T_j = 125^\circ\text{C}$

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time $V_R = 300\text{V}$, $I_F = 8\text{A}$, $di_F/dt = -200\text{A}/\mu\text{s}$	t_{rr}	-	80	-	ns
Reverse recovery charge $V_R = 300\text{V}$, $I_F = 8\text{A}$, $di_F/dt = -200\text{A}/\mu\text{s}$	Q_{rr}	-	166	-	nC
Peak reverse recovery current $V_R = 300\text{V}$, $I_F = 8\text{A}$, $di_F/dt = -200\text{A}/\mu\text{s}$,	I_{rrm}	-	4.1	-	A

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.**