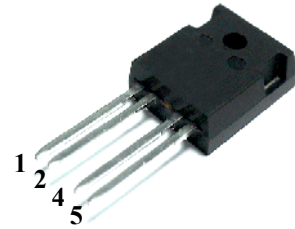
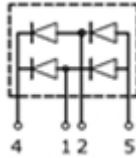


**PRELIMINARY DATASHEET**
**Fast Recovery 4X30A, 600V Diodes, Full-bridge Configuration in Isolated TO247 Package**

- Fast recovery
- Soft switching
- Low reverse recovery charge
- Low forward voltage
- RoHS compliant


**MAXIMUM RATINGS (per Diode)**, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	$V_{RRM}$	600	V
Continuous forward current	$I_F$	50	A
$T_C = 25^\circ\text{C}$		30	
$T_C = 85^\circ\text{C}$			
Surge non-repetitive forward current	$I_{FSM}$	117	
$T_C = 25^\circ\text{C}$ , $t_p = 10$ ms, sine halfwave			
Maximum repetitive forward current	$I_{FRM}$	81	
$T_C = 25^\circ\text{C}$ , $t_p$ limited by $T_{jmax}$ , $D = 0.5$			
Soldering temperature	$T_S$	260	$^\circ\text{C}$
Wave soldering, 1.6 mm (0.063 in.) from case for 10s			
Operating junction and storage temperature	$T_j, T_{stg}$	-55... +150	$^\circ\text{C}$

**Thermal and Isolation Characteristics**

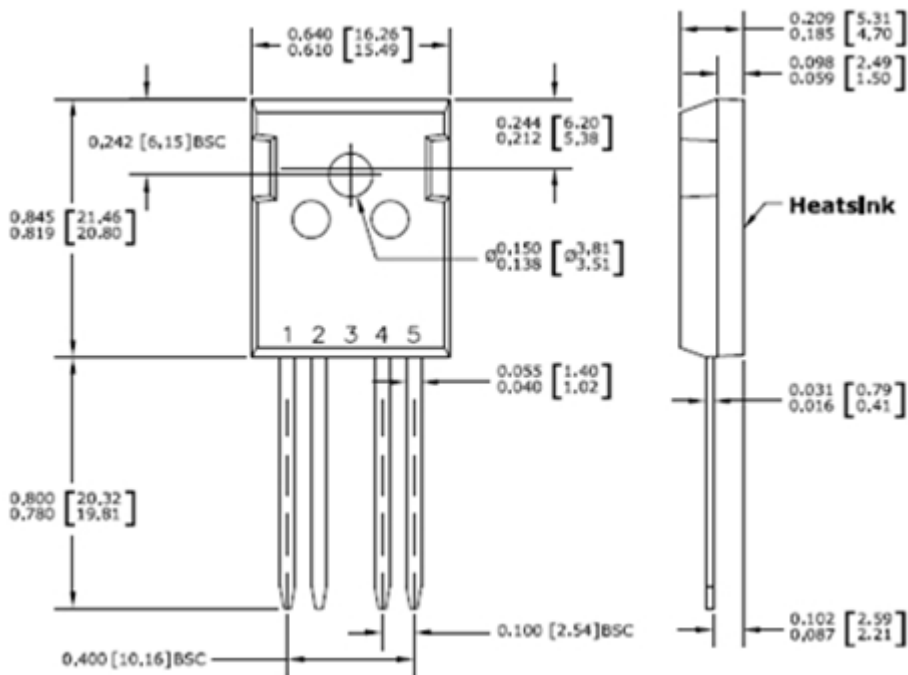
Parameter	Symbol	Max. Value	Units
<b>Characteristics</b>			
Thermal resistance, junction to case, per Diode	$R_{thJC}$	1.365	$^\circ\text{C}/\text{W}$
Thermal resistance, junction to ambient, per Diode	$R_{thJA}$	40	
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	$V_{iso}$	3000	V

**Electrical Characteristics (per Diode)**, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified

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

**Electrical Characteristics (per diode)**, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
<b>Dynamic Characteristics</b>					
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	- - -	$\mu\text{C}$

**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.**