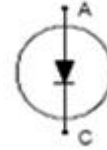
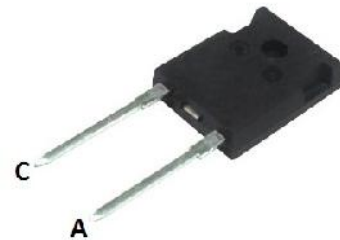


1200V 15A, Soft and Fast Recovery Diode in TO247 package
APPLICATIONS

- Switch mode power supplies
- Resonant applications
- Motor drives


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

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	1200	V
Continuous forward current, $T_{jmax}=150^{\circ}C$ $T_C=100^{\circ}C$	I_F	15	A
Diode maximum forward current, pulse width limited by T_{jmax}	I_{FM}	60	
Short circuit withstand time	t_{sc}	10	μs
Operating junction and storage temperature	T_j, T_{stg}	-55 ... +150	$^{\circ}C$

Thermal Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.85	$^{\circ}C/W$
Thermal resistance, junction to ambient	R_{thJA}	40	

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 1200\text{V}, T_j = 25^\circ\text{C}$ $V_R = 1200\text{V}, T_j = 150^\circ\text{C}$	I_R	- -	- -	25 1	μA mA
Cathode-anode breakdown voltage $I_R = 25 \mu\text{A}, T_j = 25^\circ\text{C}$	V_{Br}	1200	-	-	V
Forward voltage drop $I_F = 15\text{A}, T_j = 25^\circ\text{C}$ $I_F = 15\text{A}, T_j = 150^\circ\text{C}$	V_F	- -	2.1 2.0	2.7 -	
Dynamic Characteristics					
Reverse recovery time $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 25^\circ\text{C}$ $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 150^\circ\text{C}$	t_{rr}	- -	183 320	- -	ns
Reverse recovery charge $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 25^\circ\text{C}$ $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 150^\circ\text{C}$	Q_{rr}	- -	685 1930	- -	nC
Maximum reverse recovery current $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 25^\circ\text{C}$ $V_R = 600\text{V}, I_F = 15\text{A}, di_F/dt = 200\text{A}/\mu\text{s}, T_j = 150^\circ\text{C}$	I_{rrm}	- -	8.8 11.3	- -	A

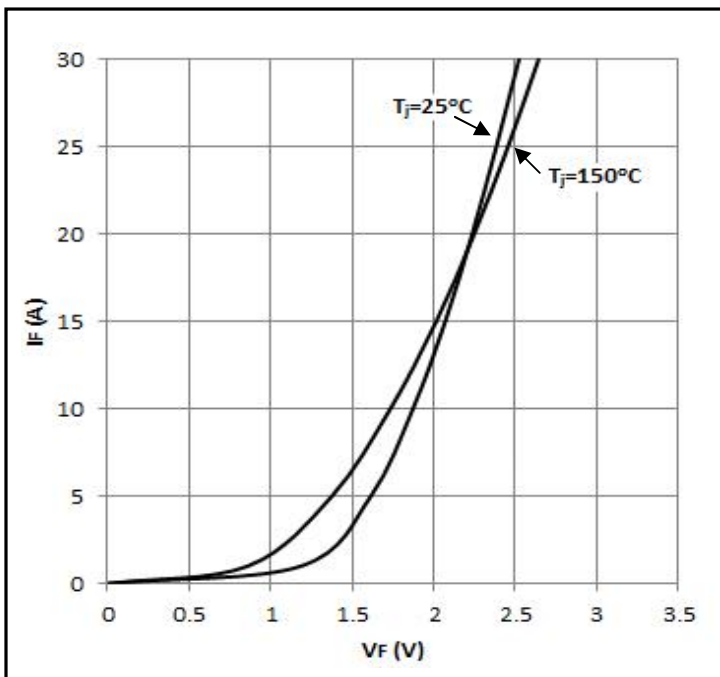
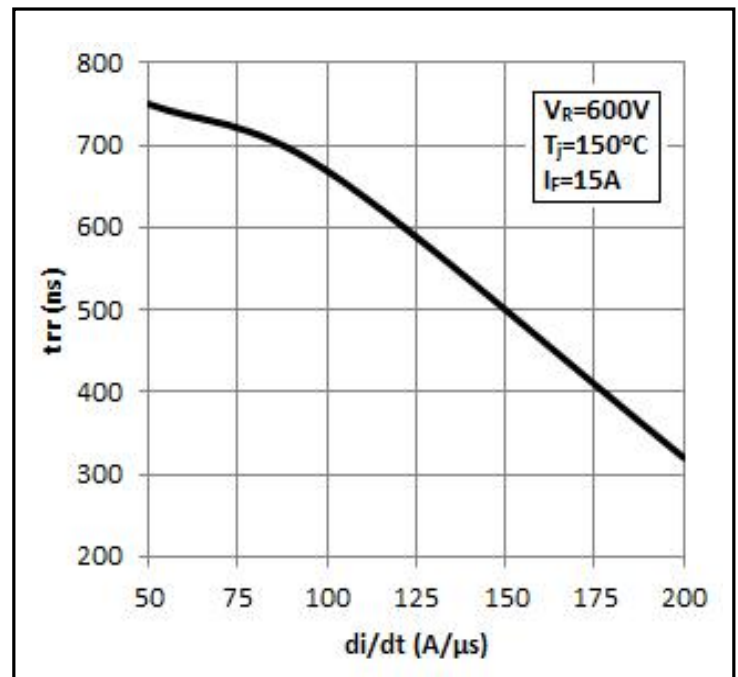
Figure 1 – Typical Diode Forward Characteristics

Figure 2 – Reverse recovery time vs. di_F/dt


Figure 3 – Reverse recovery charge vs. di_F/dt

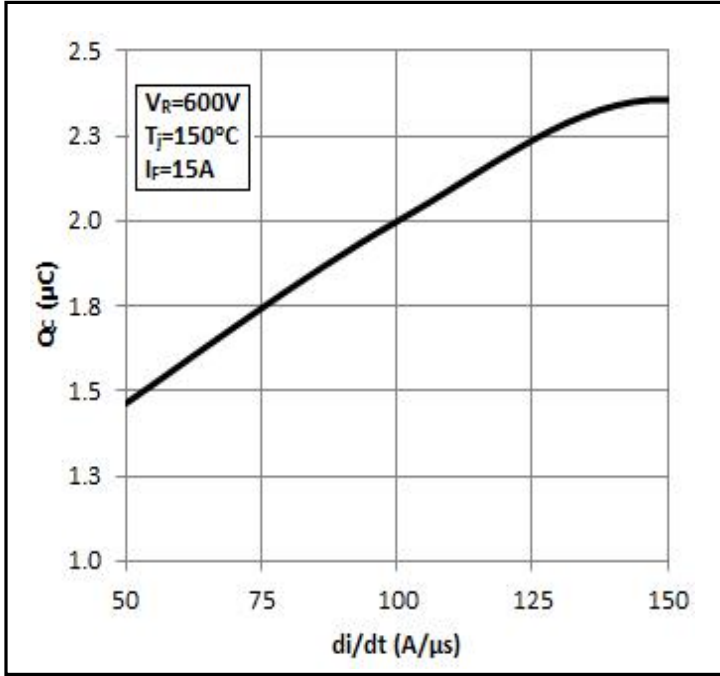


Figure 4 – Maximum reverse recovery current vs. di_F/dt

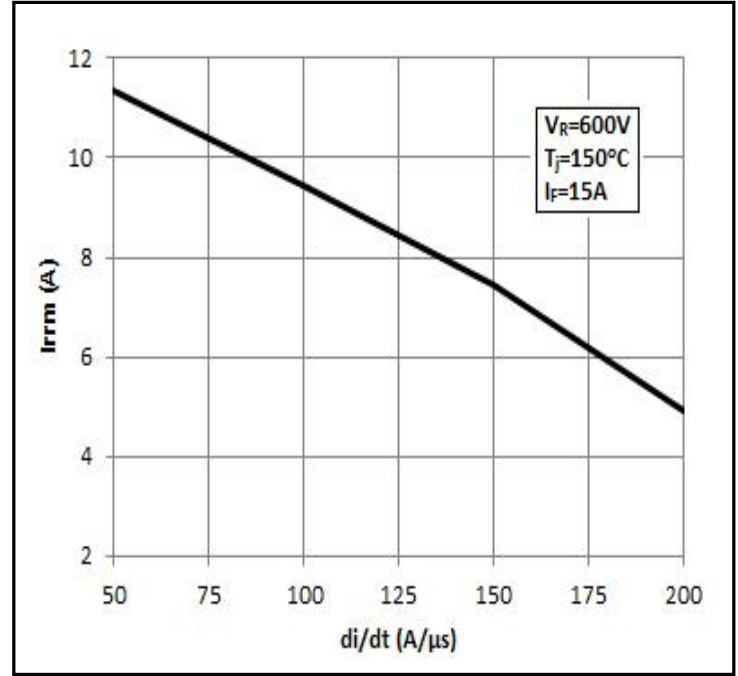
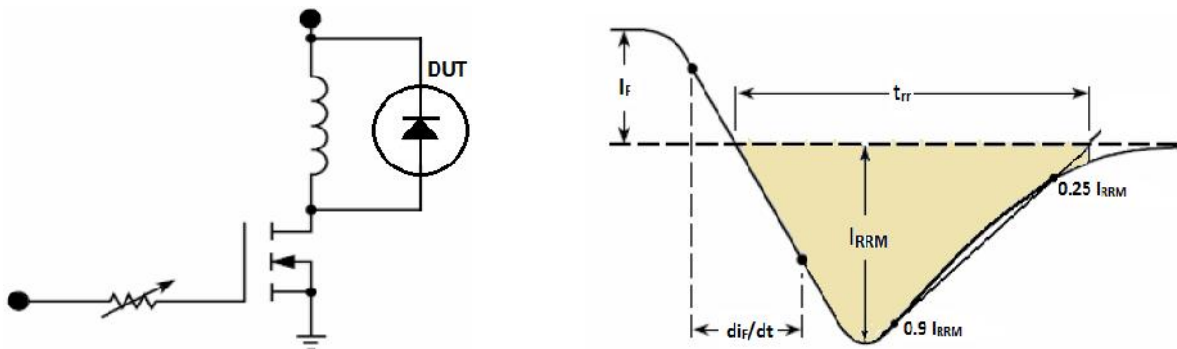
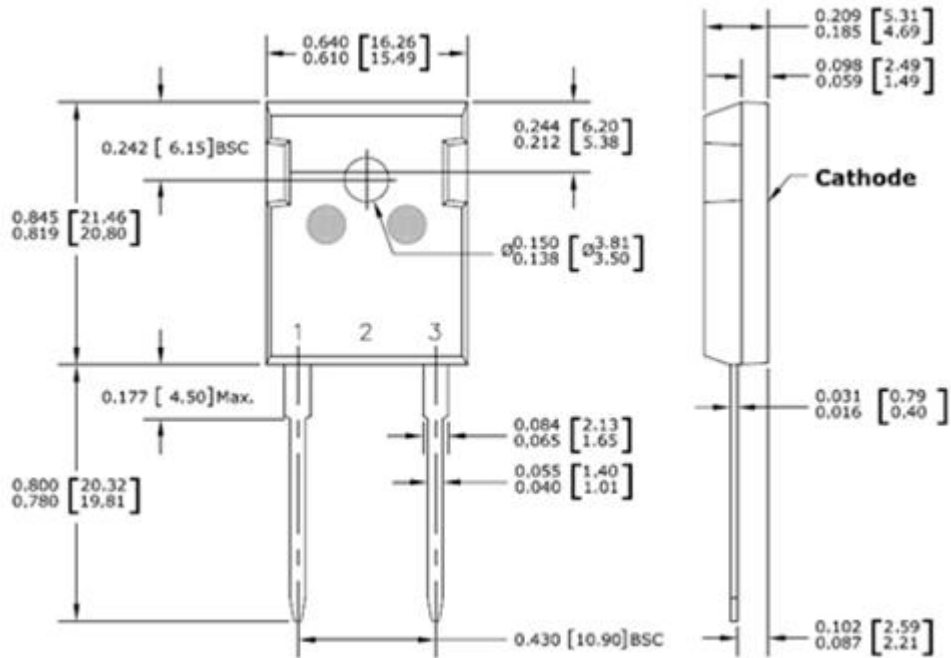


Figure 5 – Diode Reverse Recovery Test Circuit and Waveform



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.**