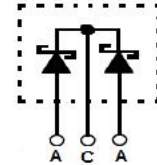


**PRELIMINARY DATASHEET**

**Parallel (Common-cathode) 1200V 15A Silicon Carbide Schottky Diode in TO247-3L package**

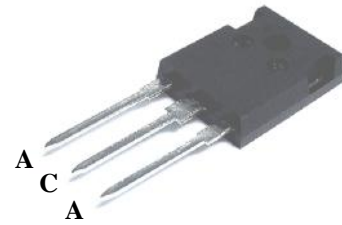
**APPLICATIONS**

- Switch mode power supplies (SMPS)
- Power factor correction (PFC)
- Motor drives
- High speed rectifiers
- Uninterruptible power supplies (UPS)
- Induction heating
- Solar inverter



**FEATURES**

- 175 °C maximum junction temperature
- Extremely fast switching independent with temperature
- Positive temperature coefficient for safe operation and ease of paralleling
- No reverse recovery or forward recovery
- Pb-free finished; **RoHS compliant**



**MAXIMUM RATINGS (per Diode)**

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	$V_{RRM}$	1200	V
DC forward current $T_C = 130\text{ }^\circ\text{C}$	$I_{F(AV)}$	15	A
Surge non-repetitive forward current, half sine wave $T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ms}$	$I_{FSM}$	71	
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 to 175	$^\circ\text{C}$

**Thermal Characteristics**

Parameter	Symbol	Max. Value	Units
<b>Characteristics</b>			
Thermal resistance, junction to case, per Diode	$R_{thJC}$	1.1	$^\circ\text{C}/\text{W}$

**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 $V_R = 1200\text{V}$ , $T_j = 25\text{ }^\circ\text{C}$ $V_R = 1200\text{V}$ , $T_j = 175\text{ }^\circ\text{C}$	$I_R$	-	-	250	$\mu\text{A}$
Forward voltage drop $I_F = 15\text{A}$ , $T_j = 25\text{ }^\circ\text{C}$ $I_F = 15\text{A}$ , $T_j = 175\text{ }^\circ\text{C}$	$V_F$	-	1.7	2.0	V
<b>Dynamic Characteristics</b>					
Total capacitive charge $V_R = 600\text{V}$ , $I_F = 15\text{A}$ , $T_j = 25\text{ }^\circ\text{C}$ $V_R = 600\text{V}$ , $I_F = 15\text{A}$ , $T_j = 150\text{ }^\circ\text{C}$	$Q_C$	-	27	-	nC

Figure 1 – Forward voltage drop vs forward current

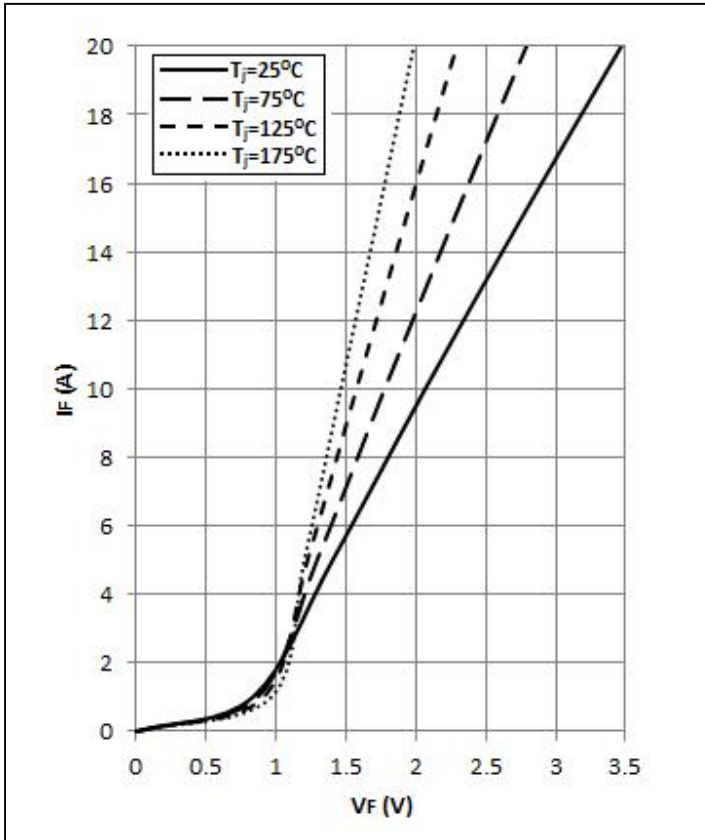
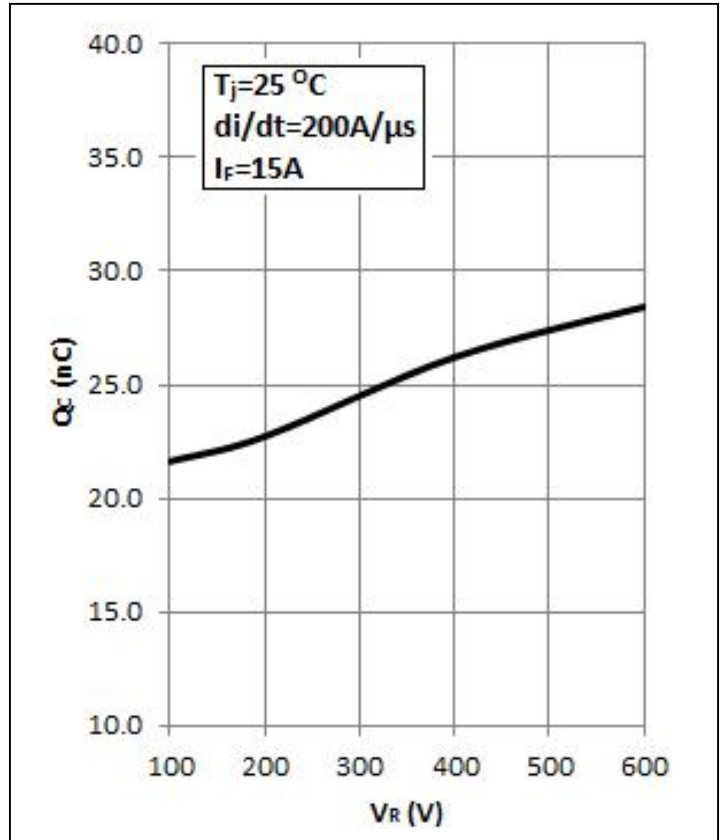
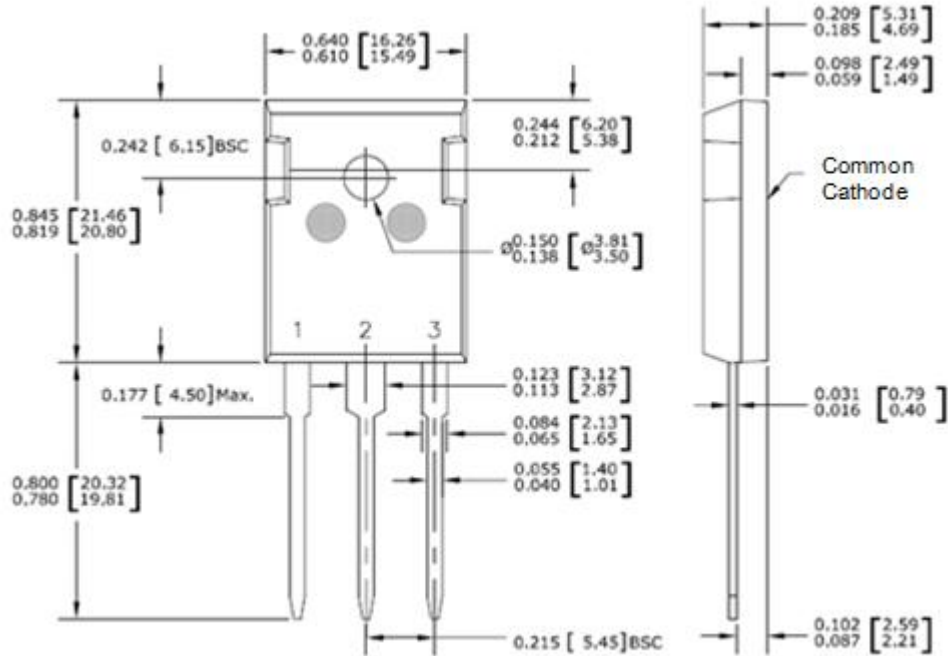


Figure 2 – Recovery charge vs Reverse voltage



**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.**