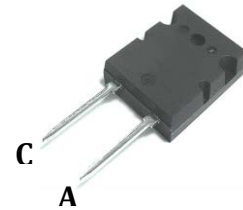
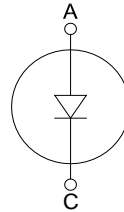




## Fast Recovery 50A, 1200V Diodes, In TO264 Package

- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- High surge current capability
- Low leakage current
- Pb free finished: RoHS compliant



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

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	$V_{RRM}$	1200	V
Continuous forward current $T_C = 100^\circ\text{C}$	$I_F$	50	A
Surge non-repetitive forward current Limited by $T_{jmax}$	$I_{FRM}$	100	
Operating junction and storage temperature	$T_j, T_{stg}$	-40... +150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max. Value	Units
<b>Characteristics</b>			
Thermal resistance, junction to case	$R_{thJC}$	0.48	$^\circ\text{C}/\text{W}$

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

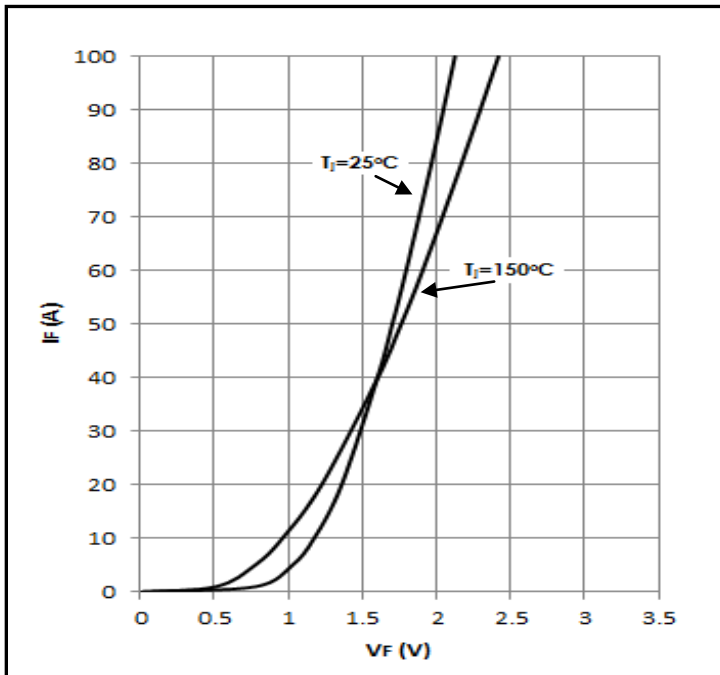
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
<b>Static Characteristics</b>					
Reverse leakage current $V_R = 1200\text{ V}, T_j = 25^\circ\text{C}$ $V_R = 1200\text{ V}, T_j = 150^\circ\text{C}$	$I_R$	-	-	100 1.5	$\mu\text{A}$ $\text{mA}$
Forward voltage drop $I_F = 50\text{ A}, T_j = 25^\circ\text{C}$ $I_F = 50\text{ A}, T_j = 150^\circ\text{C}$	$V_F$	-	1.70 1.80	2.2 -	V



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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
<b>Dynamic Characteristics</b>					
Reverse recovery time $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ , $T_j = 150^\circ\text{C}$	$t_{rr}$	-	636 978	-	ns
Maximum reverse recovery current $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ , $T_j = 150^\circ\text{C}$	$I_{rrm}$	-	13.0 26.5	-	A
Reverse recovery charge $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ $V_R = 600\text{V}$ , $I_F = 30\text{A}$ , $di_F/dt = 200\text{A}/\mu\text{s}$ , $T_j = 150^\circ\text{C}$	$Q_{rr}$	-	3.9 13.1	-	$\mu\text{C}$

**Figure 1 – Typical Diode Forward Characteristics**



**Figure 2 – Reverse recovery time vs.  $di_F/dt$**

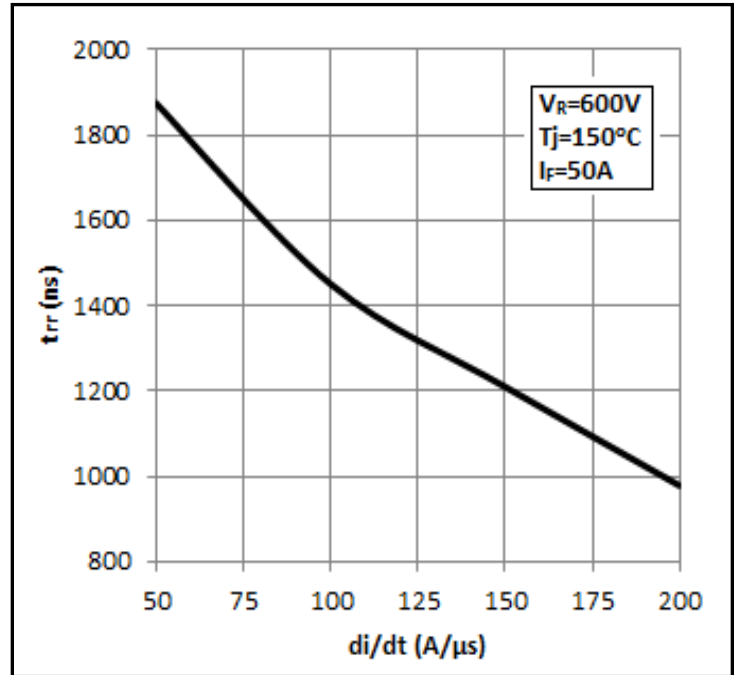


Figure 3 – Reverse recovery charge vs.

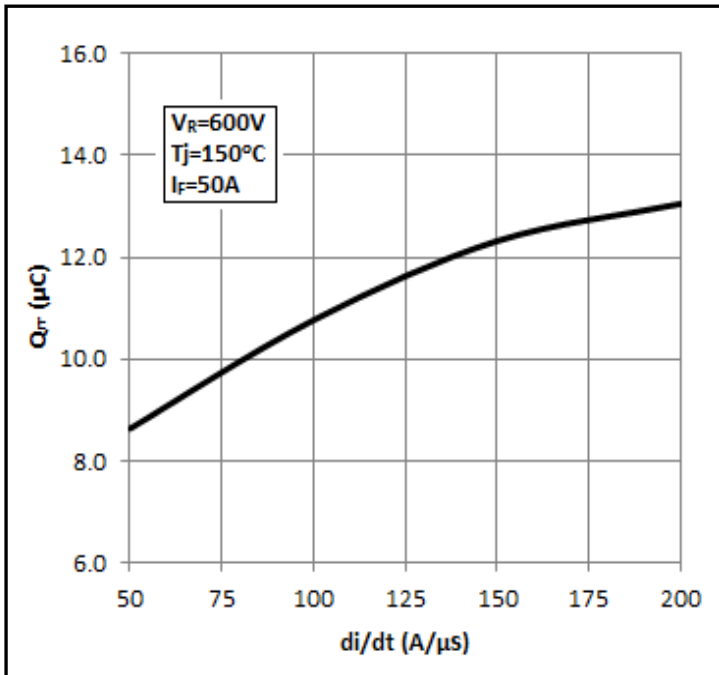


Figure 4 – Maximum reverse recovery current vs. di<sub>F</sub>/dt

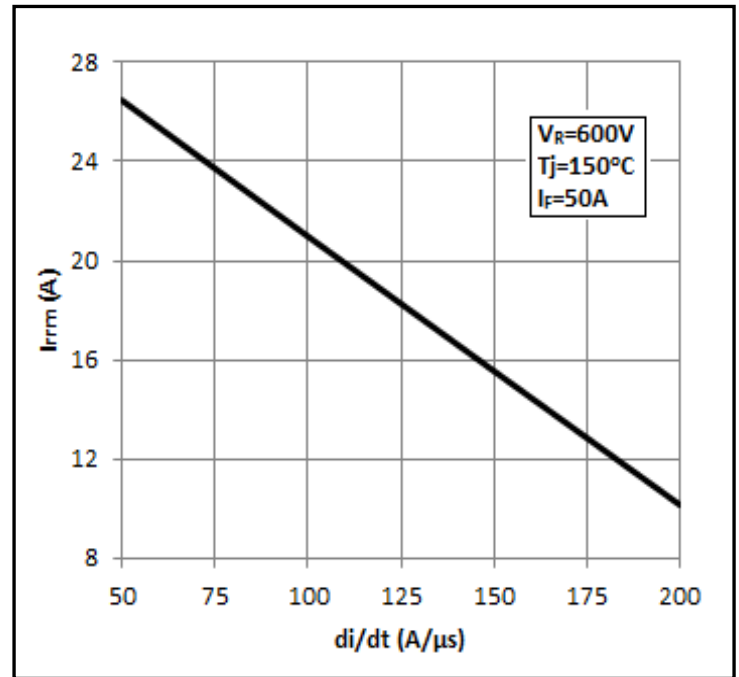
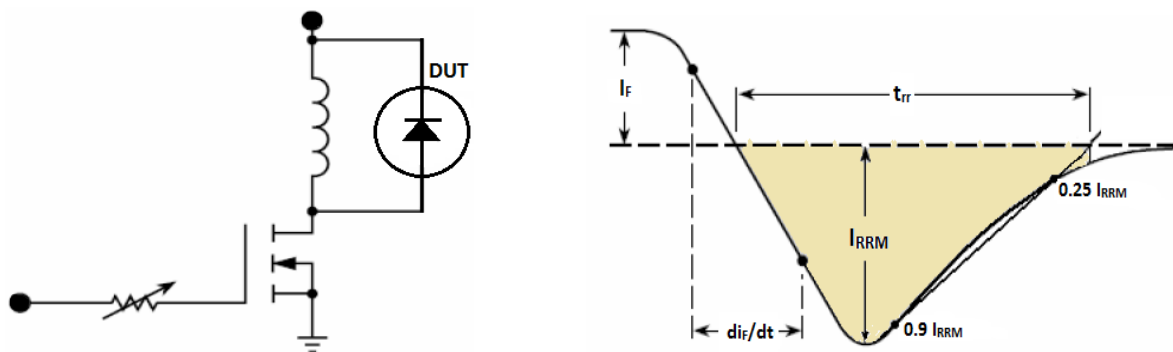


Figure 5 – Diode Reverse Recovery Test Circuit and Waveform





Package Outline

