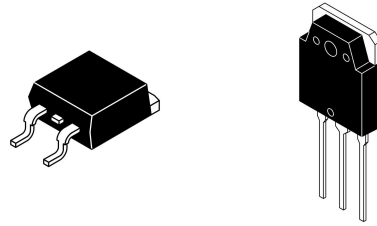


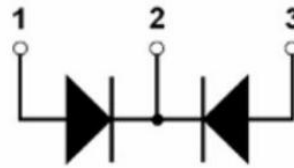
Features

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current
-



Applications

- Freewheeling, Snubber, Clamp
- Inversion Welder
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- UPS
- PFC



Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Unit
Maximum D.C. Reverse Voltage	V_R		200	V
Maximum Repetitive Reverse Voltage	V_{RRM}		200	
Average Forward Current	$I_{F(AV)}$	$T_C=100^\circ\text{C}$, Per Diode	30	A
		$T_C=100^\circ\text{C}$, Per Package	60	
RMS Forward Current	$I_{F(RMS)}$	$T_C=100^\circ\text{C}$, Per Diode	53	
Non-Repetitive Surge Forward Current	I_{FSM}	$T_C=45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, Sine	300	
Power Dissipation	P_D		156	W
Junction Temperature	T_J		-40~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}		-40~150	
Module-to-Sink	T_{orque}	Recommended (M3)	1.1	N.m
Thermal Resistance(3P)	$R_{\theta JC}$	Junction-to-Case	0.8	$^\circ\text{C}/\text{W}$
Thermal Resistance(D2PAK)	$R_{\theta JC}$	Junction-to-Case	2.0	$^\circ\text{C}/\text{W}$

Electrical Characteristics($T_C=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Leakage Current	I_{RM}	$V=200V$	-	-	25	μA
		$V=200V, T=125^\circ\text{C}$	-	-	250	
Forward Voltage	V_F	$I=30A$	-	0.89	1.2	V
		$I=30A, T=125^\circ\text{C}$	-	-	1.15	
Reverse Recovery Time	t_{rr}	$I_F=1A, V=30V, di/dt=-200A/\mu\text{s}$	-	22	-	ns
Reverse Recovery Time	t_{rr}	$V=100V, I=30A, di/dt=-200A/\mu\text{s}, T=25^\circ\text{C}$	-	26	-	A
Max. Reverse Recovery Current	I_{RRM}		-	2.3	-	
Reverse Recovery Time	t_{rr}	$V=100V, I=30A, di/dt=-200A/\mu\text{s}, T=125^\circ\text{C}$	-	35	-	ns
Max. Reverse Recovery Current	I_{RRM}		-	4.1	-	A

Electrical characteristics(Curves)

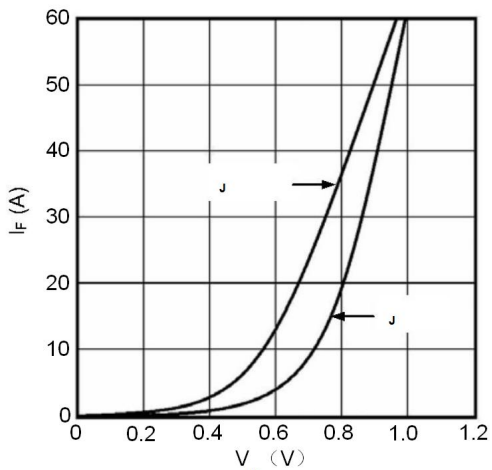


Fig1. Forward Voltage Drop vs Forward Current

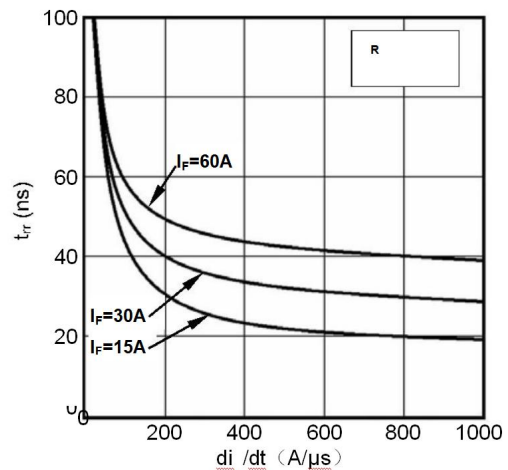


Fig2. Reverse Recovery Time vs di/dt

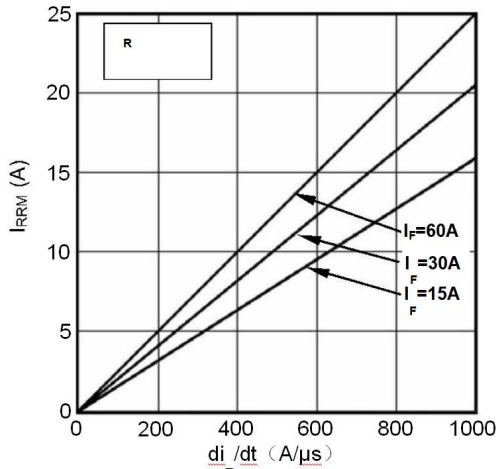


Fig3. Reverse Recovery Current vs di/dt

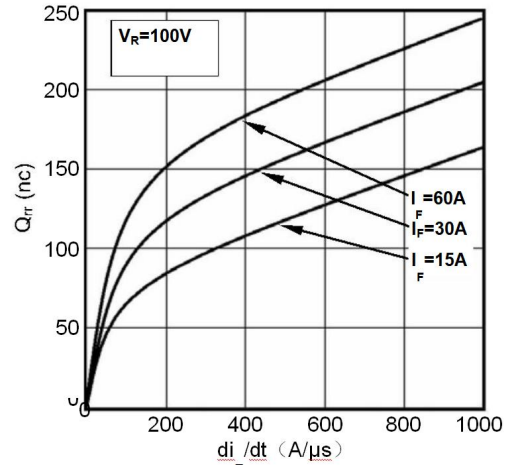


Fig4. Reverse Recovery Charge vs di/dt

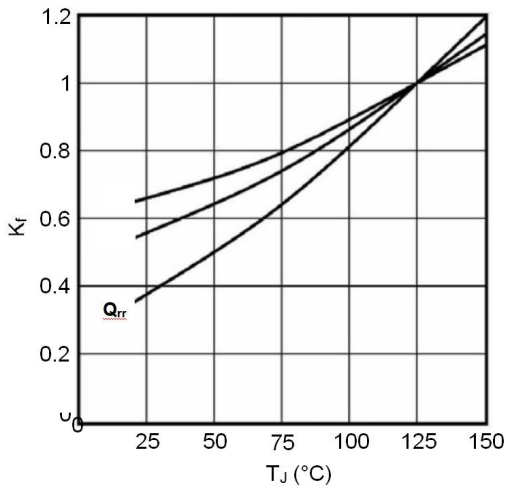


Fig5. Dynamic Parameters vs Junction Temperature

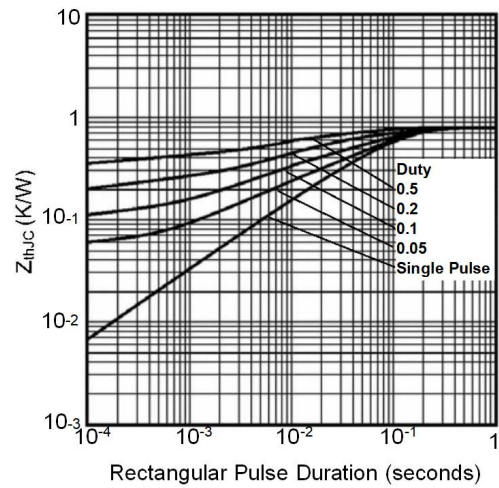


Fig6. Transient Thermal Impedance

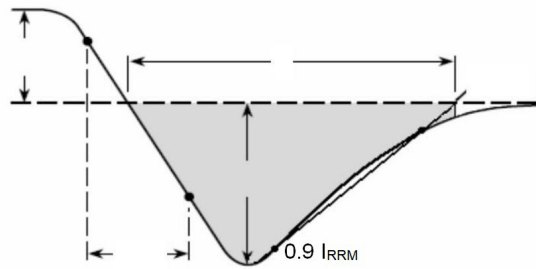
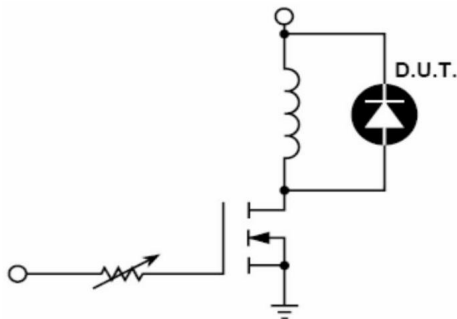
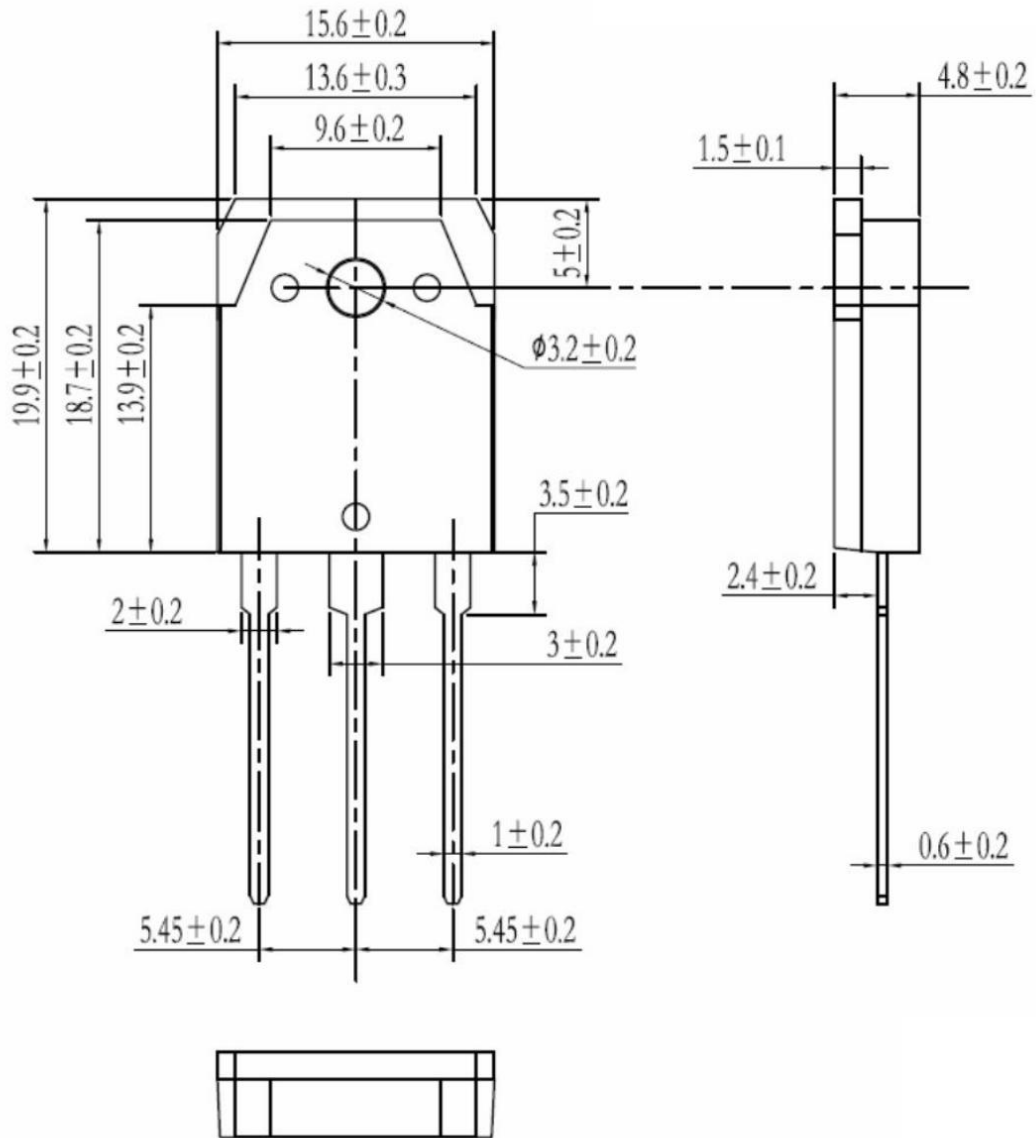


Fig7. Diode Reverse Recovery Test Circuit and Waveform

Package outline dimension

TO-3P



TO-263/D2PAK

