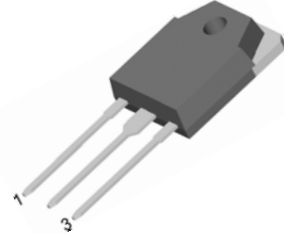


Features

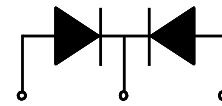
- High voltage and high reliability
- High surge current capability
- Ultrafast recovery time
- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- RoHS compliant



Package: TO-3P

Applications

- General purpose
- Boost diodes in PFC
- Switching mode power supply
- Free-wheeling diode for motor applications
- Power switching circuits



1. Anode 2. Cathode 3. Anode

Schematic Diagram

Absolute Maximum Ratings

($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Average Rectified Forward Current ($T_C = 110^{\circ}\text{C}$) per diode	$I_{F(AV)}$	15	A
Average Rectified Forward Current ($T_C = 110^{\circ}\text{C}$) per package		30	A
Non-repetitive Peak Forward Surge Current ($T_C = 25^{\circ}\text{C}, 8.3\text{ms}, \text{single half sine-wave}$)	I_{FSM}	180	A
Power Dissipation	P_D	113	W
Junction to Case thermal resistance	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics

($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Maximum Instantaneous Forward Voltage	V_F	$I_F=15\text{A}, T_J = 25^{\circ}\text{C}$		1.3	1.8	V
		$I_F=15\text{A}, T_J = 125^{\circ}\text{C}$		1.1		V
Maximum Instantaneous Reverse Current	I_R	$V_R=600\text{V}, T_J = 25^{\circ}\text{C}$			10	μA
		$V_R=600\text{V}, T_J = 125^{\circ}\text{C}$			250	μA
Maximum Reverse Recovery Time	t_{rr}	$I_F=1\text{A}, V_R=30\text{V}, di/dt=-200\text{A}/\mu\text{s}$		30		ns
	t_{rr}	$I_F=15\text{A}, V_R=300\text{V}, di/dt=-200\text{A}/\mu\text{s}$		50		ns
	t_{rr}	$I_F=15\text{A}, V_R=300\text{V}, di/dt=-200\text{A}/\mu\text{s}, T_J = 125^{\circ}\text{C}$		125		ns
Maximum Reverse Recovery Current	I_{RRM}	$I_F=15\text{A}, V_R=300\text{V}, di/dt=-200\text{A}/\mu\text{s}$		8		A

Typical Characteristic Curves

Fig1. Forward Voltage Drop VS Forward Current

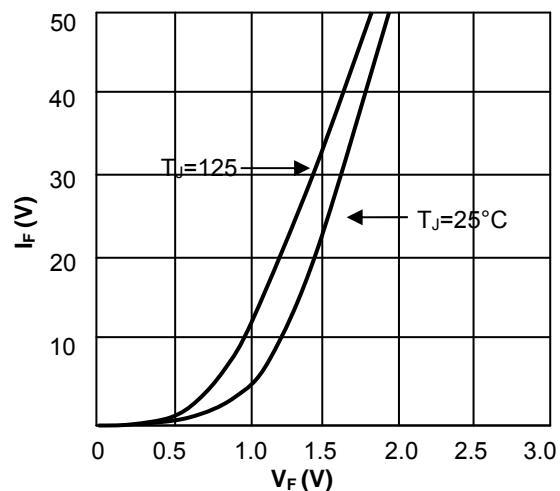


Fig2. Reverse Recovery Time vs di/dt

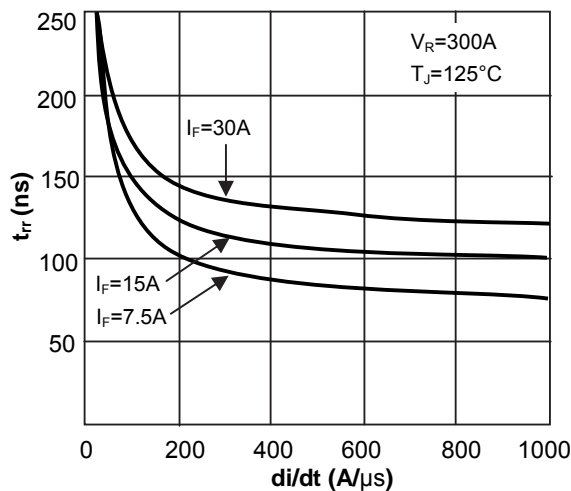


Fig3. Reverse Recovery Current vs di_F/dt

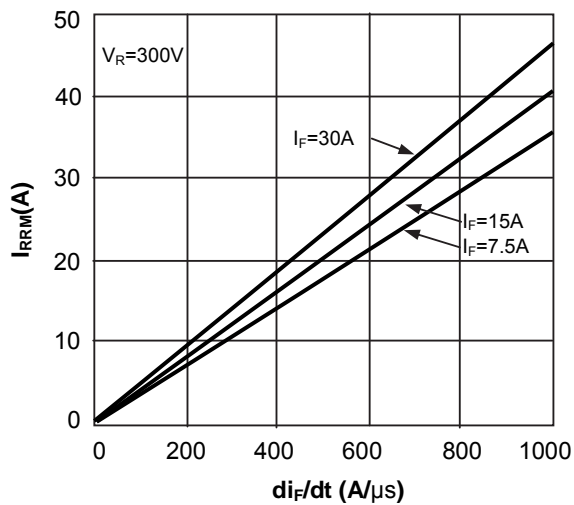


Fig4. Dynamic Parameters vs Junction Temp.

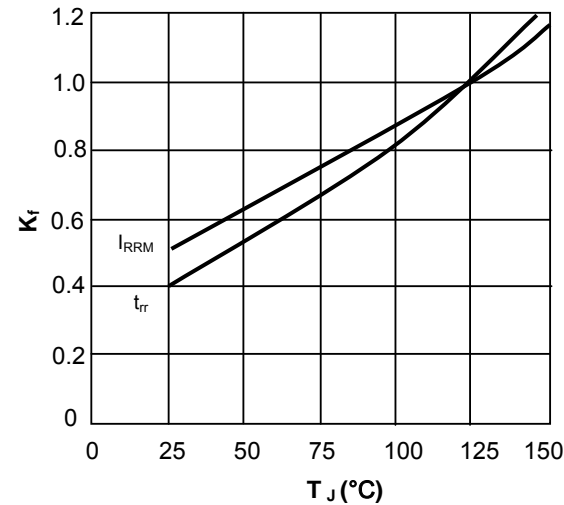


Fig5. Transient Thermal Impedance

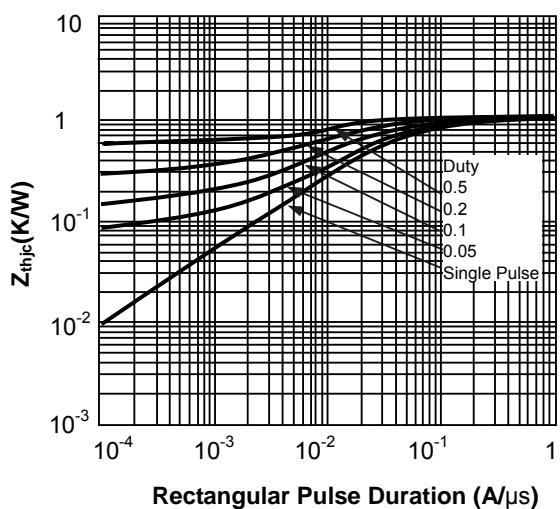
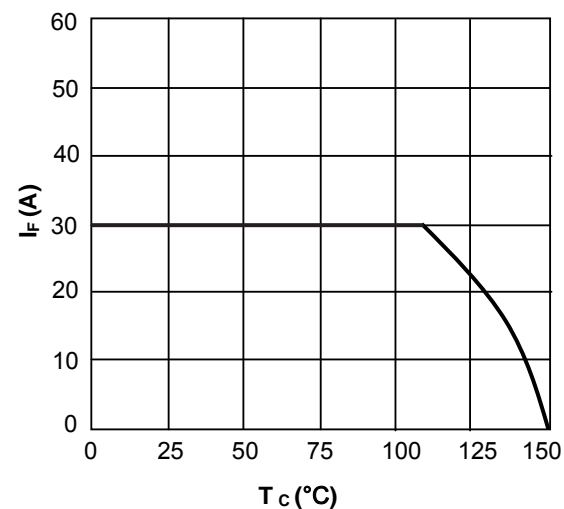


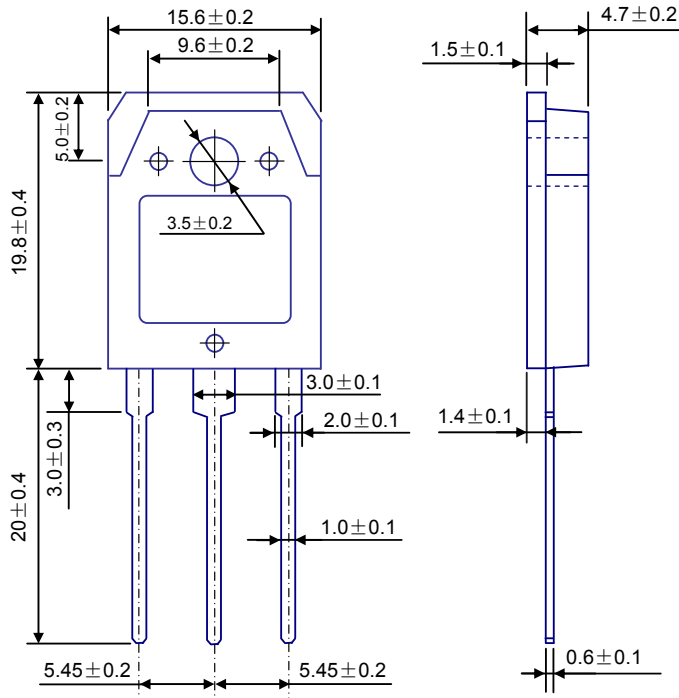
Fig6. Forward Current Derating Curve



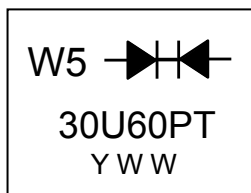
Package Outline Dimensions

(in Millimeters)

TO-3P



Marking



Y W W : Date Code

Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
MUR30U60PTW5	TO-3P	5.2g	Tube & Box	25pcs/Tube	RoHS compliant