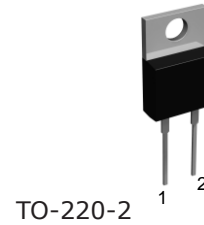


Features

- 600V, 15A
- Soft Recovery
- Operation Temperature < 175°C
- Planar Construction



Applications

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



Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_R	Maximum D.C. Reverse Voltage	600	V
V_{RRM}	Maximum Repetitive Reverse Voltage	600	V
$I_{F(AV)}$	Diode Continuous Forward Current ($T_C=100^\circ\text{C}$)	15	A
I_{FRMS}	RMS Forward Current ($T_C=100^\circ\text{C}$)	21	A
I_{FSM}	Non-Repetitive Surge Forward Current	150	A
P_D	Power Dissipation	83	W
T_J	Operating Junction Temperature Range	-55 to +175	°C
T_{STG}	Storage Temperature Range	-55 to +175	°C
R_{thJC}	Thermal Resistance	3	°C/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_F	Diode Forward Voltage	$I_F=15\text{A } T_C=25^\circ\text{C}$		1.4	1.8	V
	Diode Forward Voltage	$I_F=15\text{A } T_C=125^\circ\text{C}$		1.1	1.6	V
IR	Instantaneous reverse current	$V_R=600\text{V}$			10	μA
I_{RRM}	Diode peak Reverse Recovery Current	$I_F=1\text{A}$		0.9		A
t_{rr}	Diode Reverse Recovery Time	$di_F/dt=200\text{A}/\mu\text{s}$		30		ns
Q_{RR}	Diode Reverse Recovery Charge	$V_R=30\text{V}$		40		nC
I_{RRM}	Diode peak Reverse Recovery Current	$I_F=15\text{A},$		5		A
t_{rr}	Diode Reverse Recovery Time	$di_F/dt=200\text{A}/\mu\text{s}$		56		ns
Q_{RR}	Diode Reverse Recovery Charge	$V_R=300\text{V}$		153		nC

Fig.1 Forward Current vs Forward Voltage

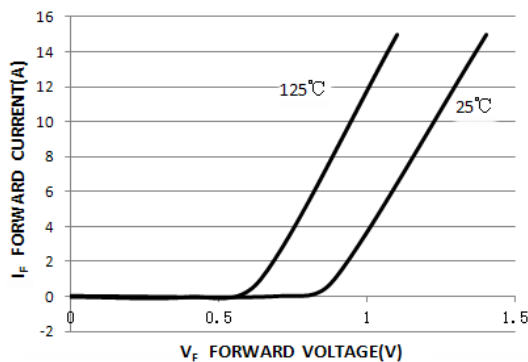


Fig.2 Reverse Current vs Reverse Voltage

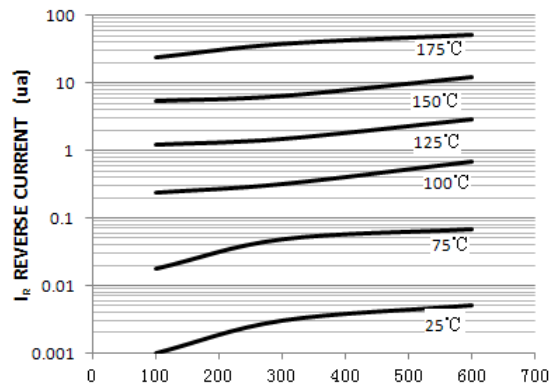


Fig.3 trr Test Circuit

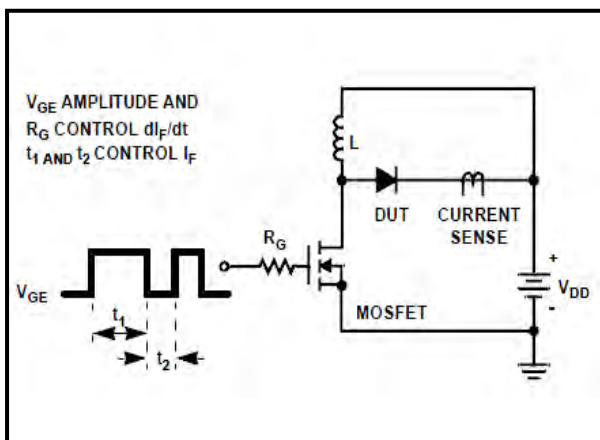
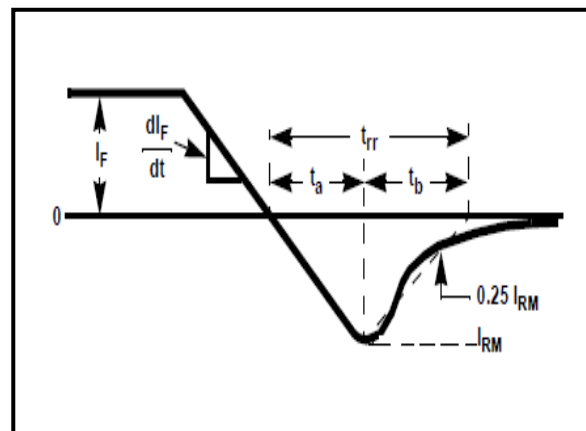
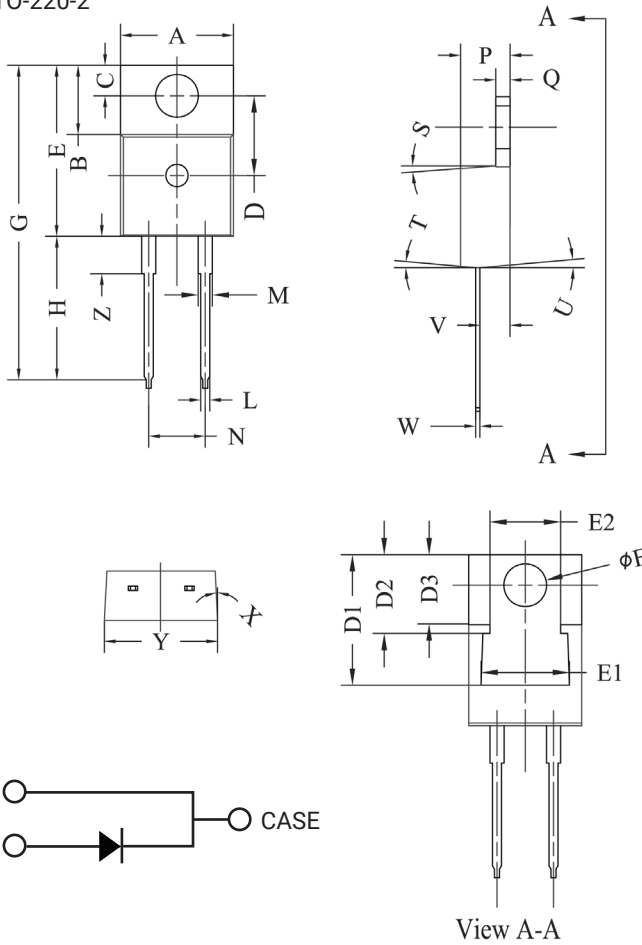


Fig.4 trr Waveforms and Definitions



Package Dimensions

Package TO-220-2



POS	Inches		Millimeters	
	Min	Max	Min	Max
A	.381	.410	9.677	10.414
B	.235	.255	5.969	6.477
C	.100	.120	2.540	3.048
D	.223	.337	5.664	8.560
D1	.457-.490		11.60-12.45 typ	
D2	.277-.303 typ		7.04-7.70 typ	
D3	.244-.252 typ		6.22-6.4 typ	
E	.590	.615	14.986	15.621
E1	.302	.326	7.68	8.28
E2	.227	.251	5.77	6.37
F	.143	.153	3.632	3.886
G	1.105	1.147	28.067	29.134
H	.500	.550	12.700	13.970
L	.025	.036	.635	.914
M	.045	.055	1.143	1.550
N	.195	.205	4.953	5.207
P	.165	.185	4.191	4.699
Q	.048	.054	1.219	1.372
S	3°	6°	3°	6°
T	3°	6°	3°	6°
U	3°	6°	3°	6°
V	.094	.110	2.388	2.794
W	.014	.025	.356	.635
X	3°	5.5°	3°	5.5°
Y	.385	.410	9.779	10.414
Z	.130	.150	3.302	3.810

NOTE:

1. Dimension L, M, W apply for Solder Dip Finish