

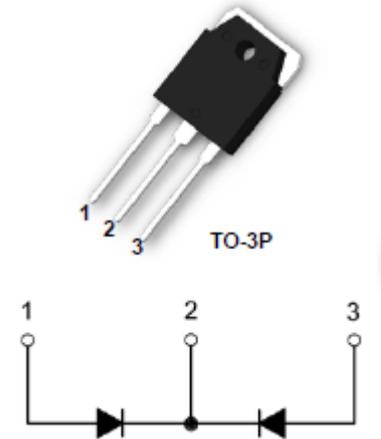
## FAST RECOVER DIODE

### Features

- 400V,80A
- Soft Recovery
- Operation Temperature < 150℃
- 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	400	V
$V_{RRM}$	Maximum Repetitive Reverse Voltage	400	V
$I_{F(AV)}$	Continuous Forward Current Per Diode ( $T_C=100\text{ }^\circ\text{C}$ )	40	A
	Continuous Forward Current Per Package( $T_C=100\text{ }^\circ\text{C}$ )	80	A
$I_{FRMS}$	RMS Forward Current ( $T_C=100\text{ }^\circ\text{C}$ )	56	A
$I_{FSM}$	Non-Repetitive Surge Forward Current	400	A
$P_D$	Power Dissipation	156	W
$T_J$	Operating Junction Temperature Range	-55 to +175	°C
$T_{STG}$	Storage Temperature Range	-55 to +175	°C
$R_{thJC}$	Thermal Resistance	0.8	°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	$I_F=40\text{A } T_C=25^\circ\text{C}$		1.05	1.3	V
	Diode Forward Voltage	$I_F=40\text{A } T_C=125^\circ\text{C}$		0.95	1.2	V
IR	Instantaneous reverse current	$V_R=400\text{V}$			10	$\mu\text{A}$
$I_{RRM}$	Diode peak Reverse Recovery Current	$I_F=1\text{A}$		1.7		A
$t_{rr}$	Diode Reverse Recovery Time	$di_F/dt=200\text{A}/\mu\text{s}$		50		ns
$Q_{RR}$	Diode Reverse Recovery Charge	$V_R=30\text{V}$		50		nC
$I_{RRM}$	Diode peak Reverse Recovery Current	$I_F=40\text{A},$		8.2		A
$t_{rr}$	Diode Reverse Recovery Time	$di_F/dt=200\text{A}/\mu\text{s}$		100		ns
$Q_{RR}$	Diode Reverse Recovery Charge	$V_R=200\text{V}$		400		nC

Fig.1 Forward Current vs Forward Voltage

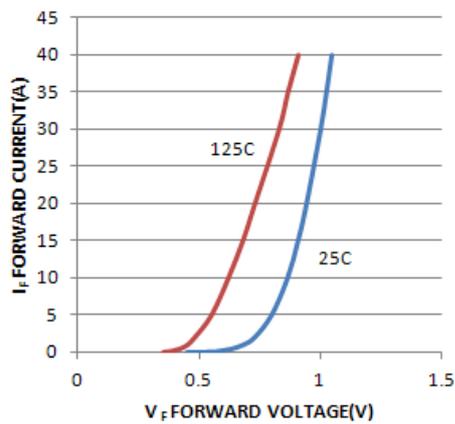


Fig.2 Reverse Current vs Reverse Voltage

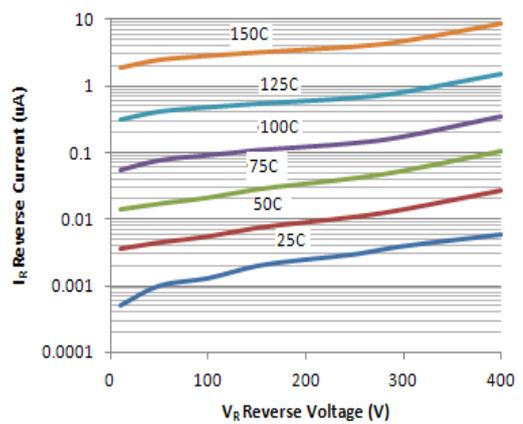


Fig.3 trr Test Circuit

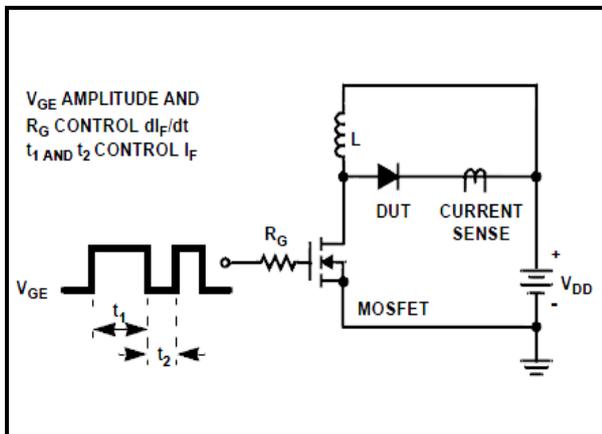
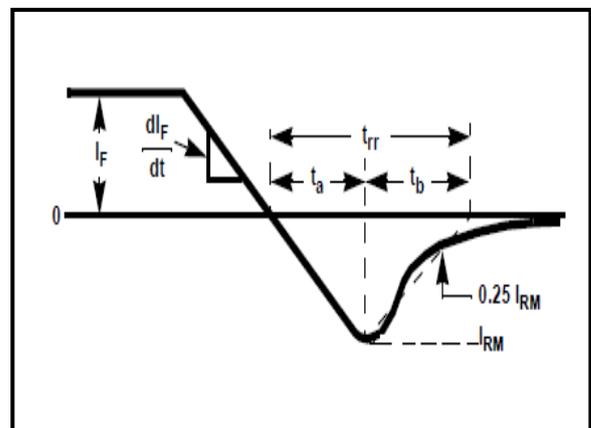


Fig.4 trr Waveforms and Definitions



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