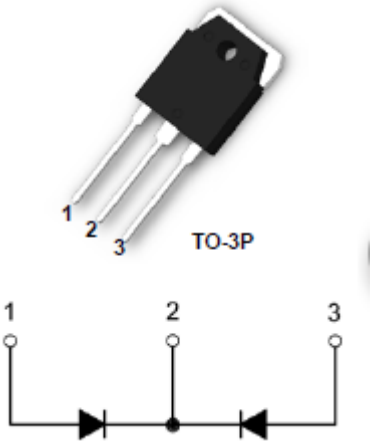
SL30S20A

FAST RECOVER DIODE



Features

- 200V,30A
- 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	200	V
V_{RRM}	Maximum Repetitive Reverse Voltage	200	V
$I_{F(AV)}$	Continuous Forward Current Per Diode (T_C=100 ℃)	15	A
	Continuous Forward Current Per Package(T_C=100 ℃)	30	A
I_{FRMS}	RMS Forward Current (T_C=100℃)	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	℃
T_{STG}	Storage Temperature Range	-55 to +175	℃
R_{thJC}	Thermal Resistance	1.5	℃/W

Electrical Characteristics (T_C=25℃ unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
V_F	Diode Forward Voltage	I_F=15A T_C=25℃		0.95	1.2	V
	Diode Forward Voltage	I_F=15A T_C=125℃		0.8	1.1	V
IR	Instantaneous reverse current	VR=200V			10	uA
I_{RRM}	Diode peak Reverse Recovery Current	I_F= 1A dif/dt=200A/us VR=30V		0.9		A
trr	Diode Reverse Recovery Time			22		ns
Q_{RR}	Diode Reverse Recovery Charge			15		nC
I_{RRM}	Diode peak Reverse Recovery Current	I_F= 8A, dif/dt=200A/us VR=100V		3.4		A
trr	Diode Reverse Recovery Time			30		ns
Q_{RR}	Diode Reverse Recovery Charge			60		nC

Fig.1 Forward Current vs Forward Voltage

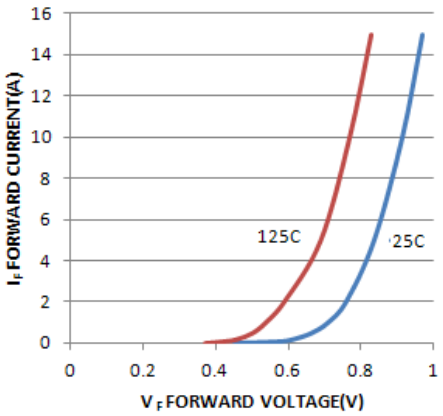


Fig.2 Reverse Current vs Reverse Voltage

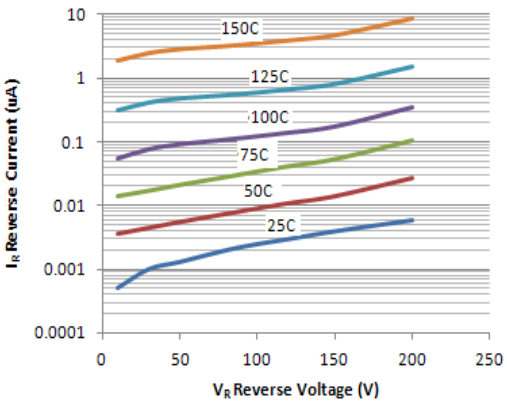


Fig.3 trr Test Circuit

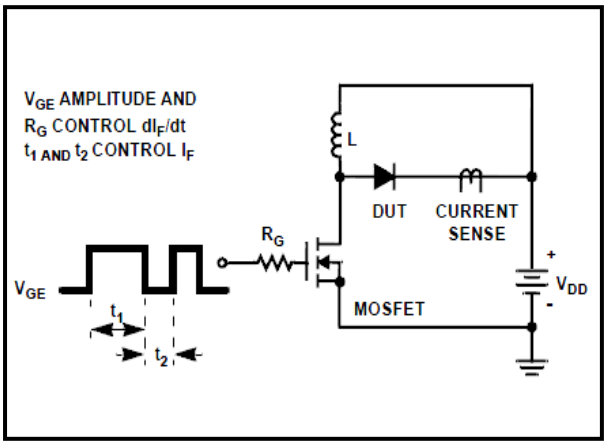


Fig.4 trr Waveforms and Definitions