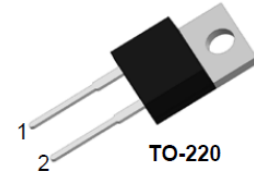


FAST RECOVER DIODE

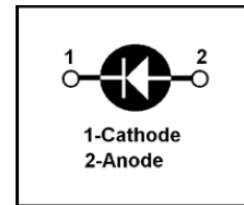
Features

- 600V,30A
- Soft Recovery
- Operation Temperature < 175℃
- 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 ($T_C=100^\circ\text{C}$)	30	A
I_{FRMS}	RMS Forward Current ($T_C=100^\circ\text{C}$)	42	A
I_{FSM}	Non-Repetitive Surge Forward Current	300	A
P_D	Power Dissipation	104	W
T_J	Operating Junction Temperature Range	-55 to +175	℃
T_{STG}	Storage Temperature Range	-55 to +175	℃
R_{thJC}	Thermal Resistance	1.2	℃/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	$I_F=15\text{A } T_C=25^\circ\text{C}$		1.2	1.6	V
	Diode Forward Voltage	$I_F=15\text{A } T_C=125^\circ\text{C}$		1.1	1.5	V
IR	Instantaneous reverse current	$V_R=600\text{V}$			10	μA
I_{RRM}	Diode peak Reverse Recovery Current	$I_F=1\text{A}$		1.6		A
t_{rr}	Diode Reverse Recovery Time	$dI_F/dt=200\text{A}/\mu\text{s}$		45		ns
Q_{RR}	Diode Reverse Recovery Charge	$V_R=30\text{V}$		40		nC
I_{RRM}	Diode peak Reverse Recovery Current	$I_F=15\text{A},$		8.8		A
t_{rr}	Diode Reverse Recovery Time	$dI_F/dt=200\text{A}/\mu\text{s}$		120		ns
Q_{RR}	Diode Reverse Recovery Charge	$V_R=300\text{V}$		570		nC

Fig.1 Forward Current vs Forward Voltage

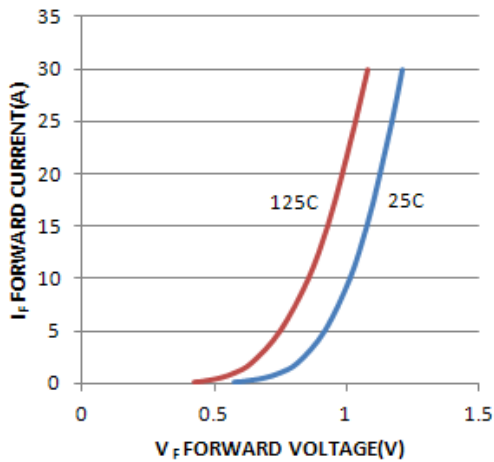


Fig.2 Reverse Current vs Reverse Voltage

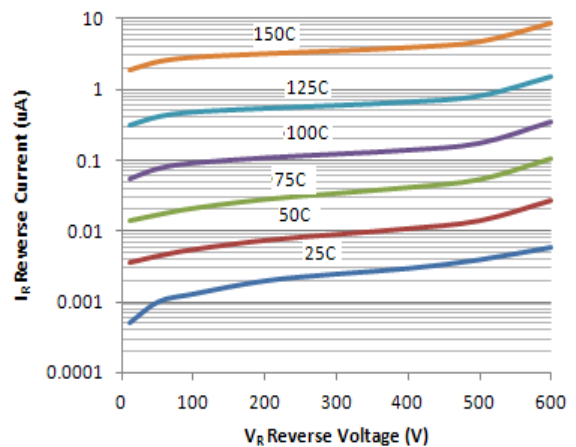


Fig.3 trr Test Circuit

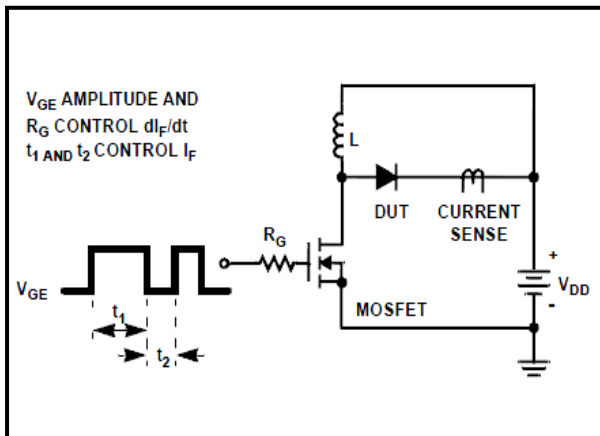
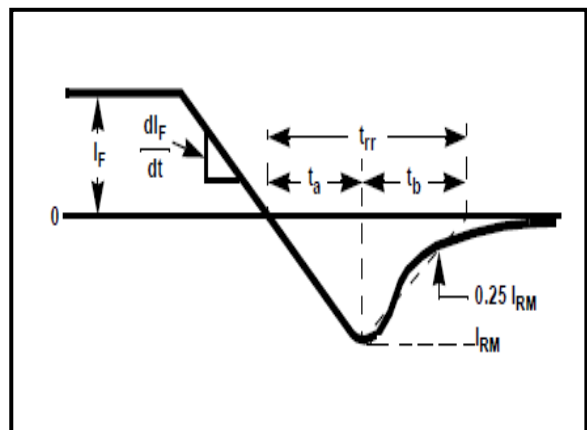


Fig.4 trr Waveforms and Definitions



Disclaimers

KEDA Semiconductor Co., Ltd reserves the right to make changes without notice in order to improve reliability, function or design and to discontinue any product or service without notice. Customers should obtain the latest relevant information before orders and should verify that such information is current and complete. All products are sold subject to KEDA's terms and conditions supplied at the time of order acknowledgement.

KEDA Semiconductor Co., Ltd warrants performance of its hardware products to the specifications at the time of sale, Testing, reliability and quality control are used to the extent KEDA deems necessary to support this warrantee. Except where agreed upon by contractual agreement, testing of all parameters of each product is not necessarily performed.

KEDA Semiconductor Co., Ltd does not assume any liability arising from the use of any product or circuit designs described herein. Customers are responsible for their products and applications using KEDA's components. To minimize risk, customers must provide adequate design and operating safeguards.

KEDA Semiconductor Co., Ltd does not warrant or convey any license either expressed or implied under its parent rights, nor the rights of others. Reproduction of information in KEDA's datasheets or data books is permissible only if reproduction is without modification or alteration. Reproduction of this information with any alteration is an unfair and deceptive business practice. KEDA Semiconductor Co., Ltd is not responsible or liable for such altered documentation.

Resale of KEDA's products with statements different from or beyond the parameters stated by KEDA Semiconductor Co., Ltd for that product or service voids all express or implied warranties for the associated KEDA's product or service and is unfair and deceptive business practice. KEDA Semiconductor Co., Ltd is not responsible or liable for any such statements.