

SPECIFICATION

DEVICE NAME : SILICON DIODE

TYPE NAME : ERW05-060

SPEC. No. :

DATE :

Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

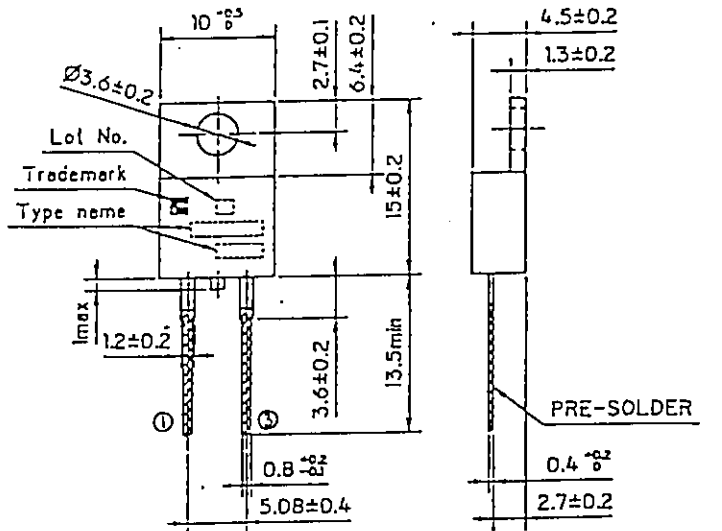
		DATE	NAME	APPROVED	Fuji Electric Co.,Ltd	
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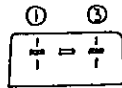
Ratings and characteristics of Fuji silicon diode

ERW05-060

1. Outline Drawing



DIMENSIONS ARE IN MILLIMETERS.



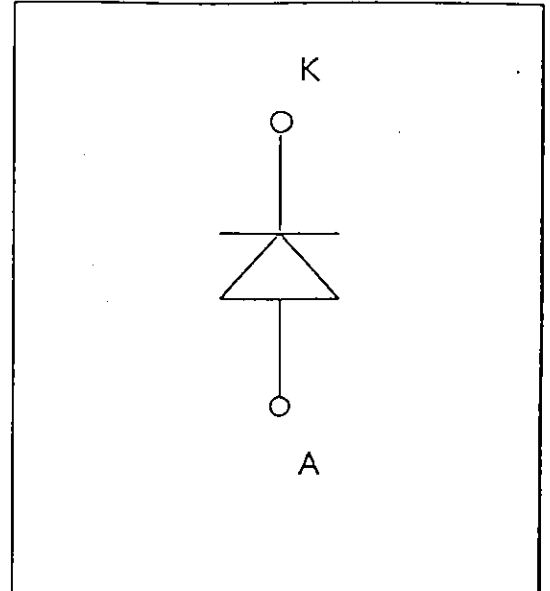
CONNECTION

① CATHODE

③ ANODE

JEDEC : TO-220AC

2. Equivalent circuit



3. Absolute maximum ratings (Tc=25°C)

Items	Symbols	Conditions	Ratings	Units
Repetitive Reverse Voltage	V_{RRM}	—————	600	V
Repetitive peak surge current	I_{FM}	20kHz Duty50% Squ. wave	Tc= 81°C 30	A
			Tc= 25°C 46	A
Average rectified forward current	$I_{F(AV)}$	DC	28	A
Non-repetitive peak surge current	I_{FSM}	Pulse10ms, sin wave	110	A
Maximam Power Dissipaion	P_D	—————	70	W
Operating Temperature	T_j	—————	+150	°C
Storage Temperature	T_{stg}	—————	-40 ~+150	°C
Mounting Screw Torque	—	—————	50	N · cm

4. Electrical Characteristics (at $T_c=25^\circ\text{C}$ unless otherwise specified)

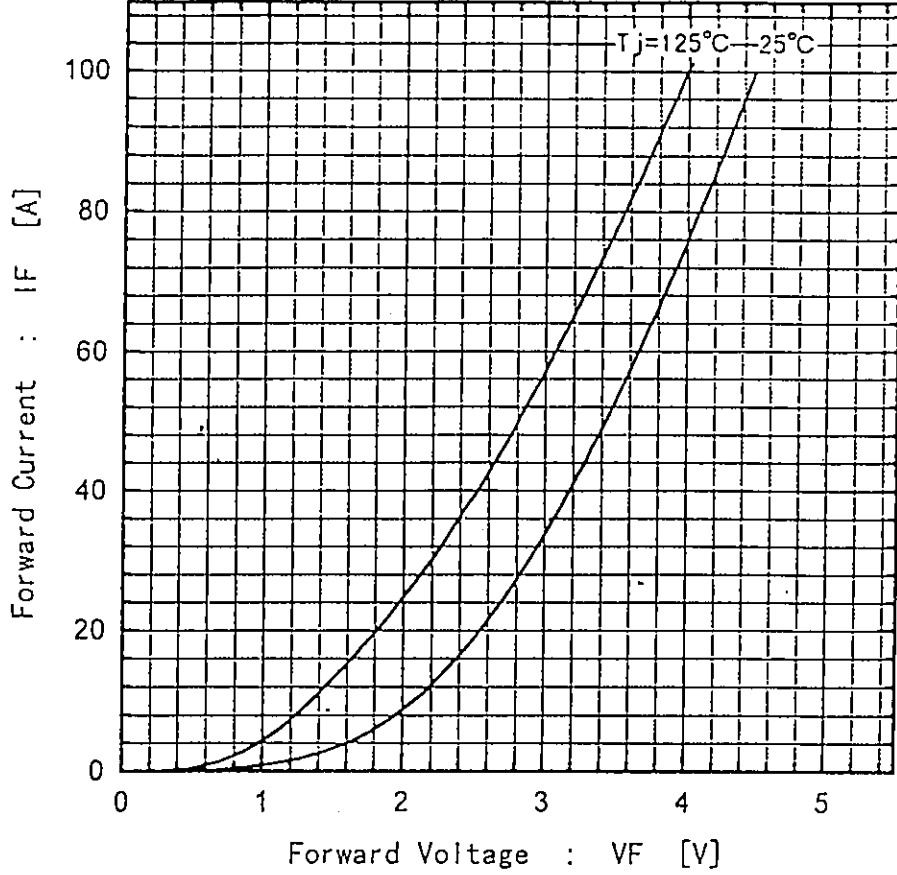
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Reverse Current	I_R	—	—	1.0	$V_R = 600 \text{ V}$	mA
forward voltage	V_F	—	—	3.0	$I_F = 30\text{A}$	V
Reverse recovery time	t_{rr}	—	—	0.3	$I_F=30\text{A}, V_R=200\text{V}$ $di/dt=100\text{A}/\mu\text{s}$	μS

5. Thermal resistance characteristics

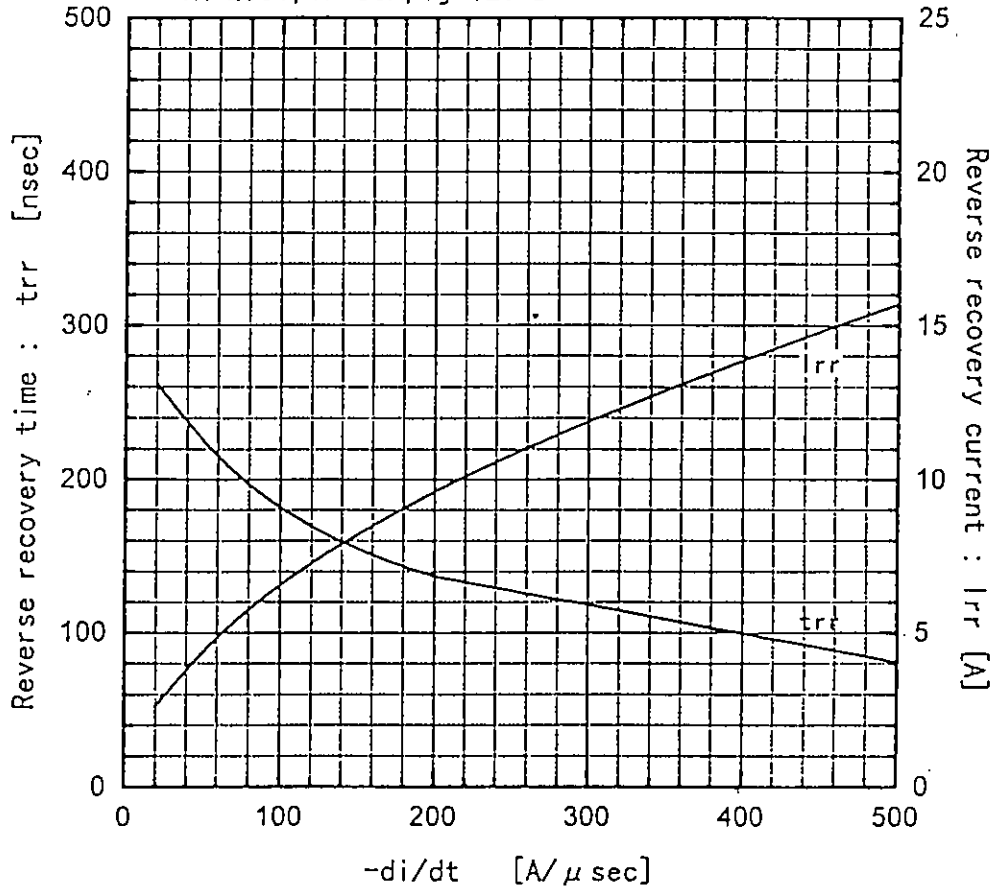
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$	—	—	1.78	junction to case	$^\circ\text{C}/\text{W}$

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Forward voltage vs. Forward current

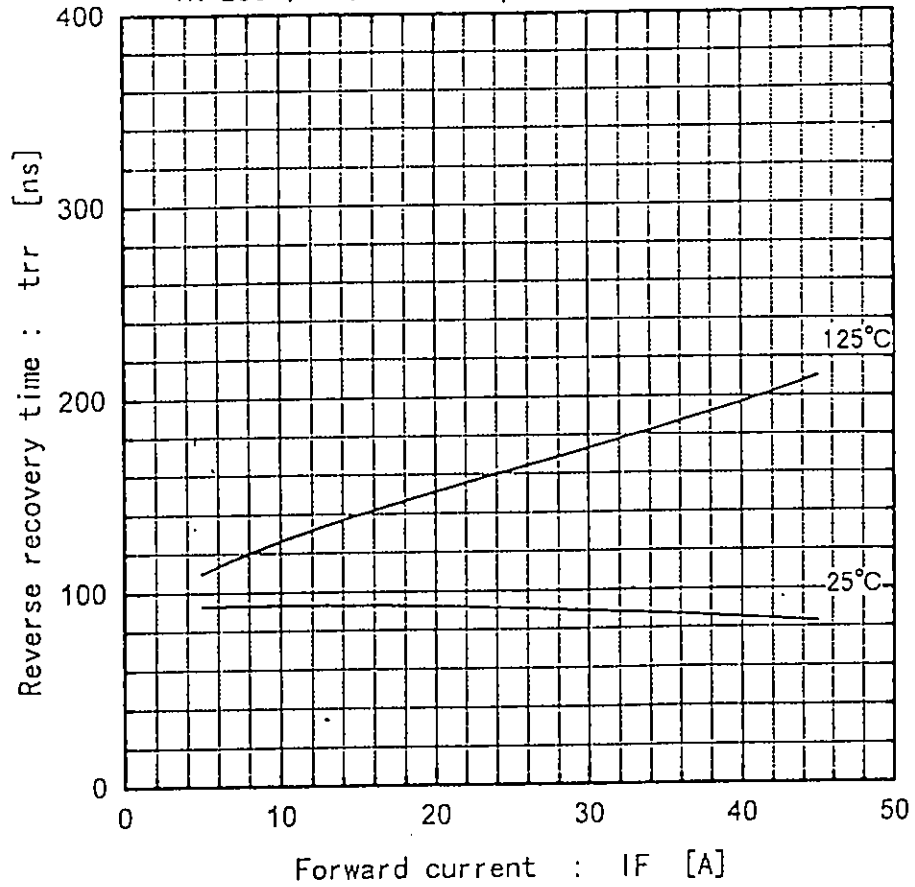


Reverse recovery characteristics vs. $-di/dt$
 $V_R=200V, I_F=30A, T_j=125^\circ C$

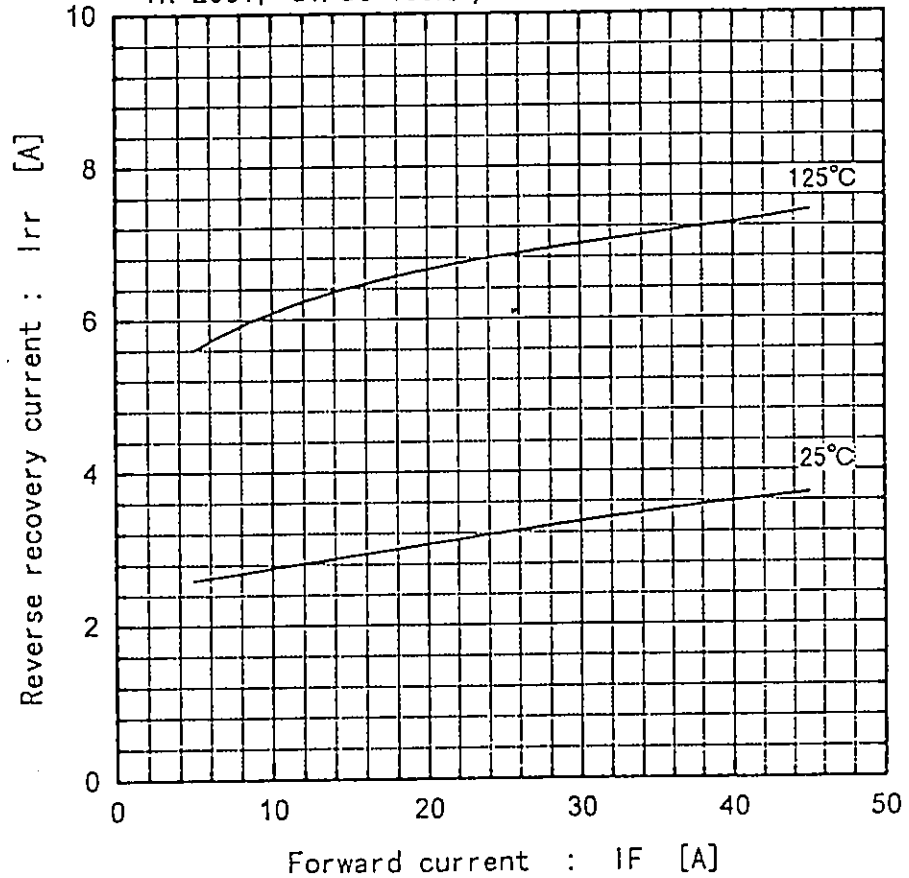


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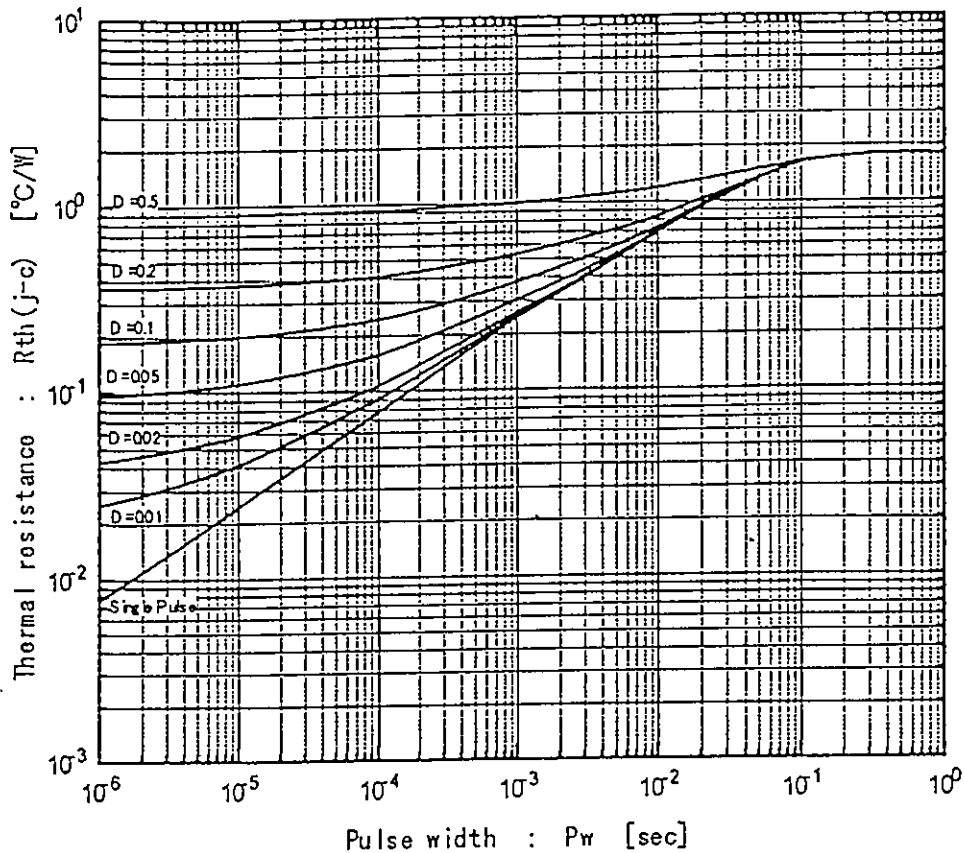
Reverse recovery time vs. Forward current
 $V_R=200V, -di/dt=100A/\mu sec$



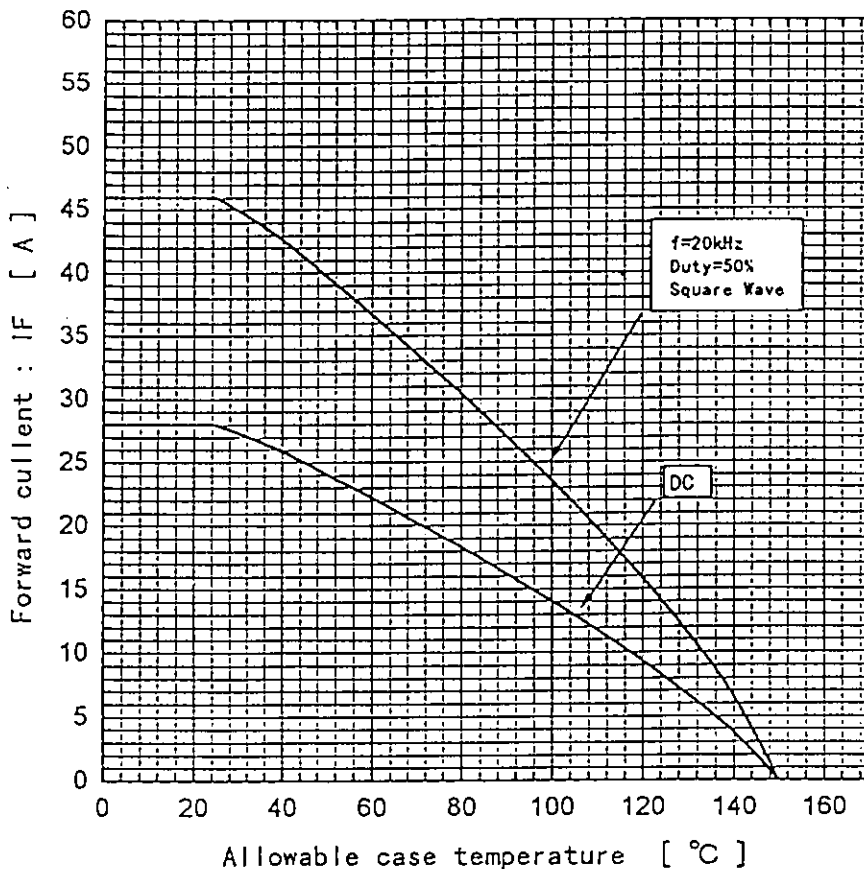
Reverse recovery current vs. Forward current
 $V_R=200V, -di/dt=100A/\mu sec$



ERW05-060
Transient thermal resistance



Forward current vs. Max. allowable case temperature



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