

# SPECIFICATION

DEVICE NAME : SILICON DIODE  
TYPE NAME : ERW05-060  
SPEC. No. :  
DATE :

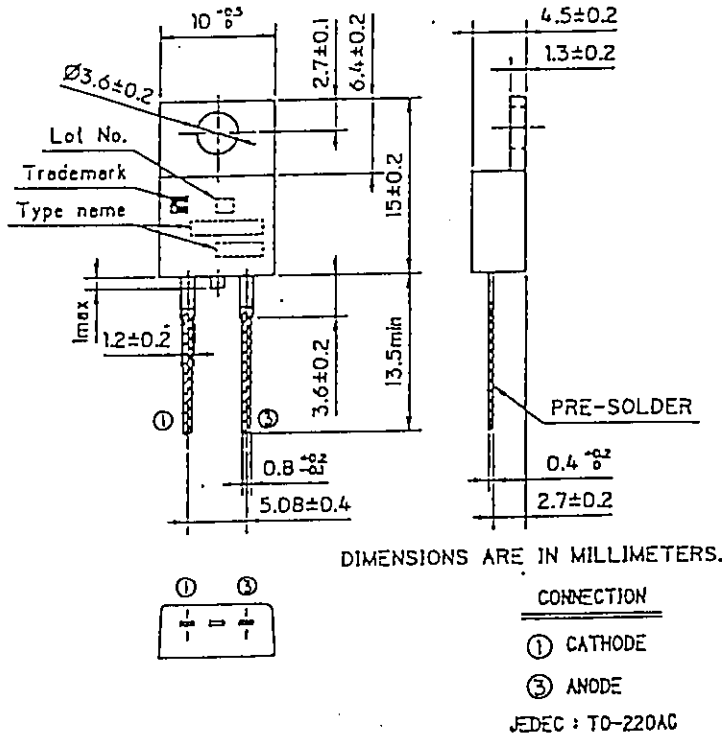
Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

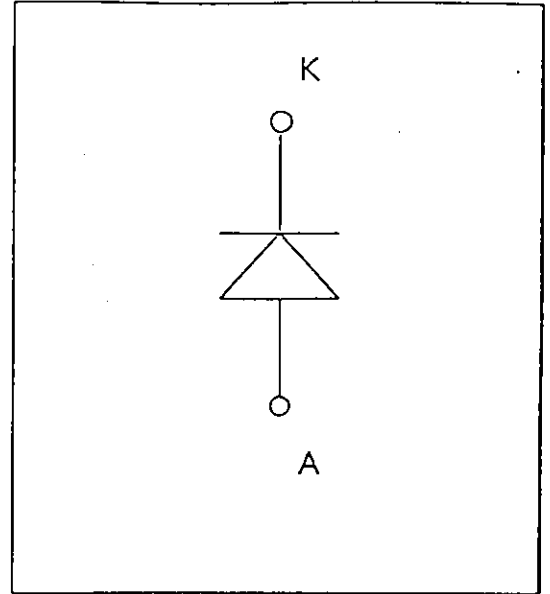
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DRAWN				DWG.NO.	1/6	a
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ERW05-060

1. Outline Drawing



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 Tc=25°C unless otherwise specified )

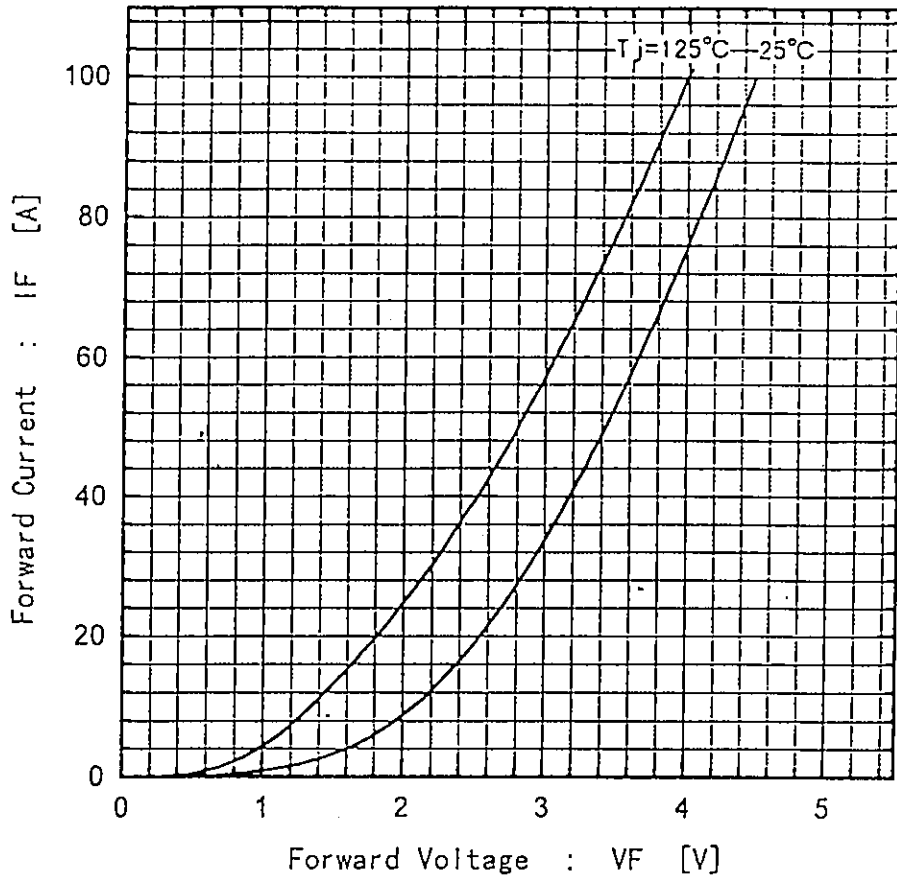
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Reverse Current	$I_R$	—	—	1.0	$V_R = 600 \text{ V}$	mA
forward voltage	$V_F$	—	—	3.0	$I_F = 30\text{A}$	V
Reverse recovery time	$t_{rr}$	—	—	0.3	$I_F=30\text{A}, V_R=200\text{V}$ $di/dt=100\text{A}/\mu\text{s}$	$\mu\text{S}$

5. Thermal resistance characteristics

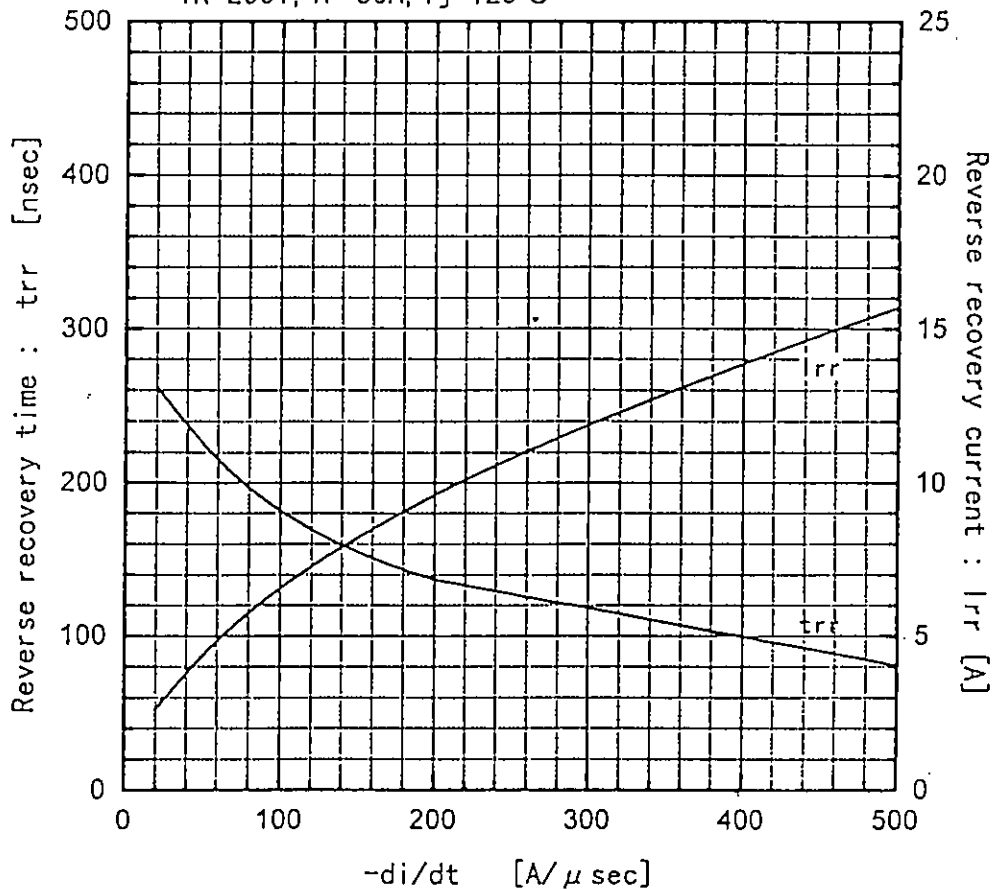
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$	—	—	1.78	junction to case	$^{\circ}\text{C}/\text{W}$

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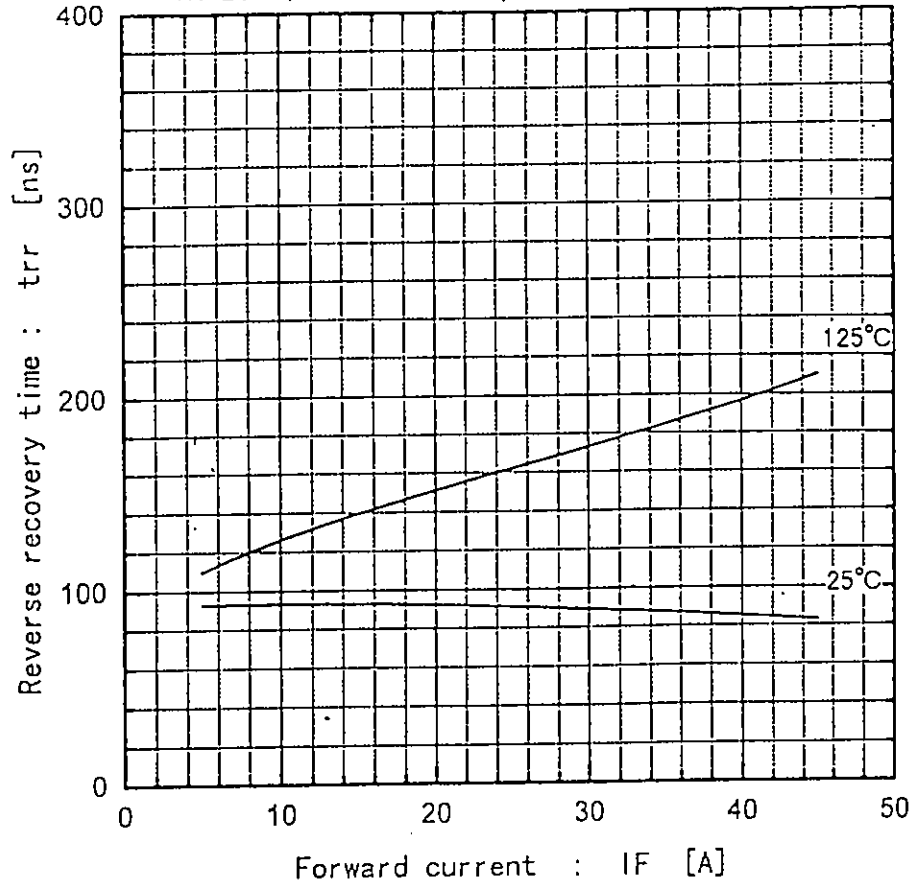
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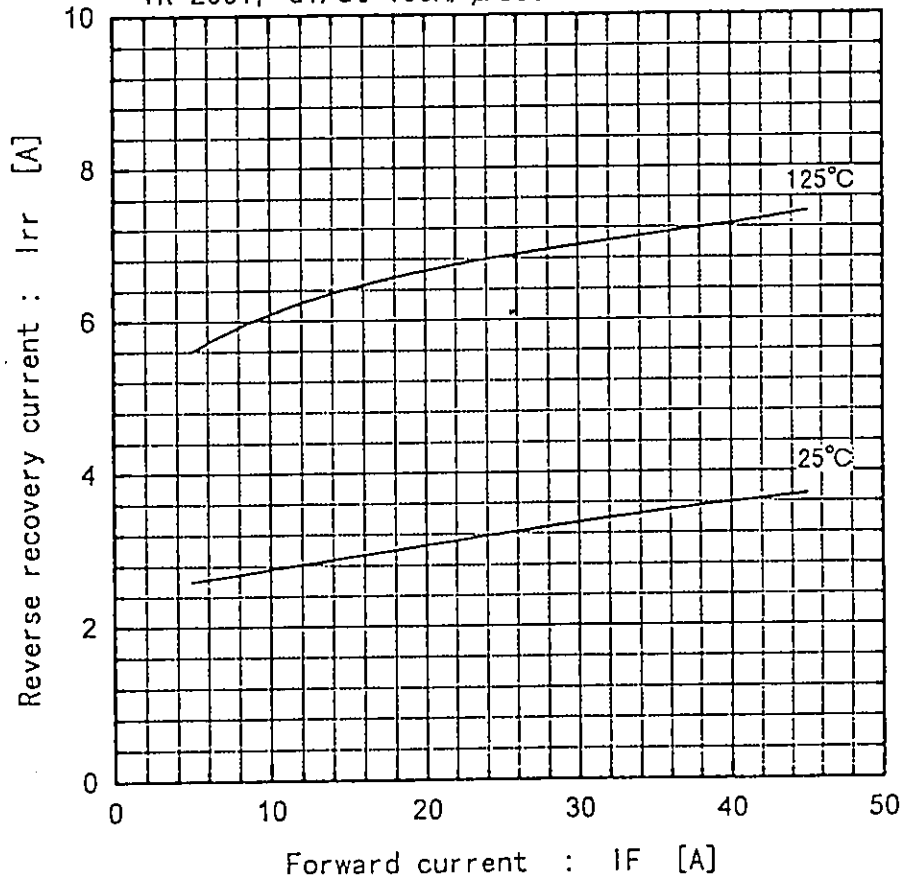
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Reverse recovery time vs. Forward current  
 $V_R=200V, -di/dt=100A/\mu sec$



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



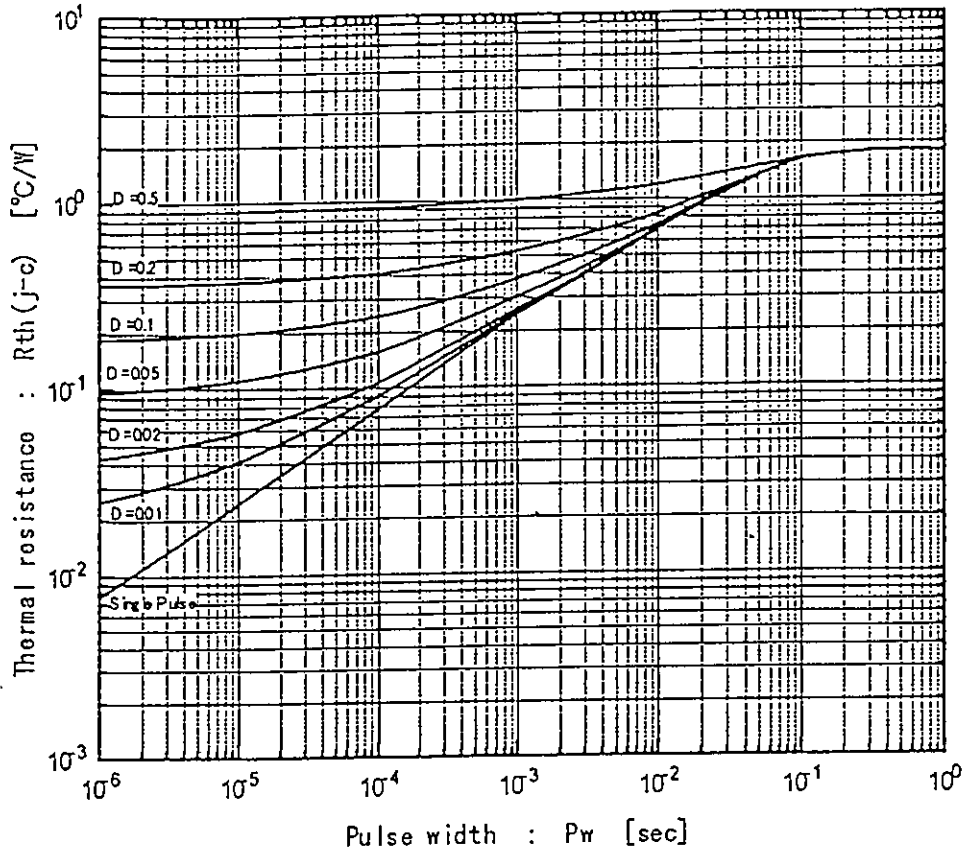
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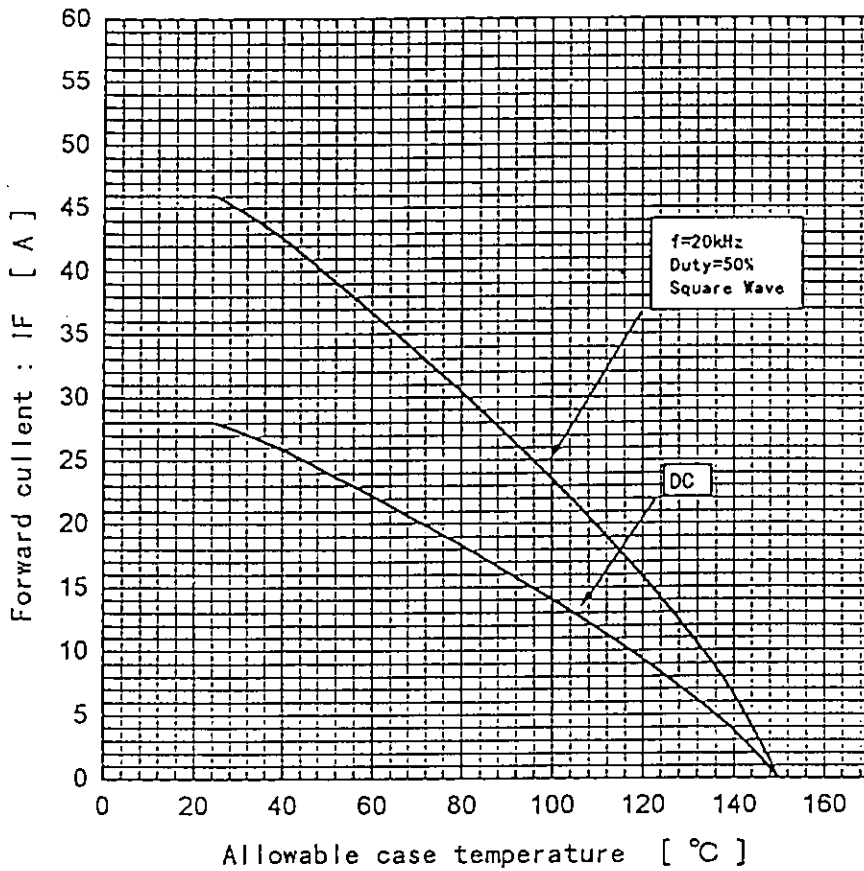
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ERW05-060  
Transient thermal resistance



Forward current vs. Max. allowable case temperature



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