

SPECIFICATION

DEVICE NAME : SILICON DIODE
 TYPE NAME : ERW12-120
 SPEC. No. :
 DATE :

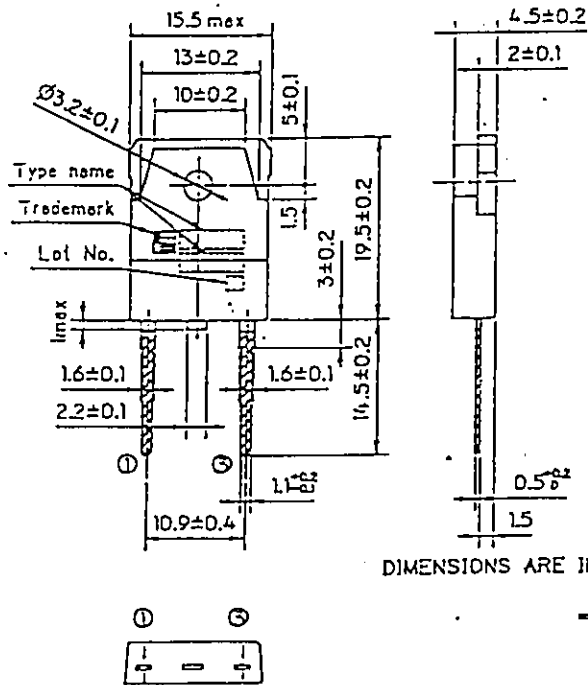
Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

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DRAWN				DWG. NO. 1/6
CHECKED				

ERW12-120

1. Outline Drawing



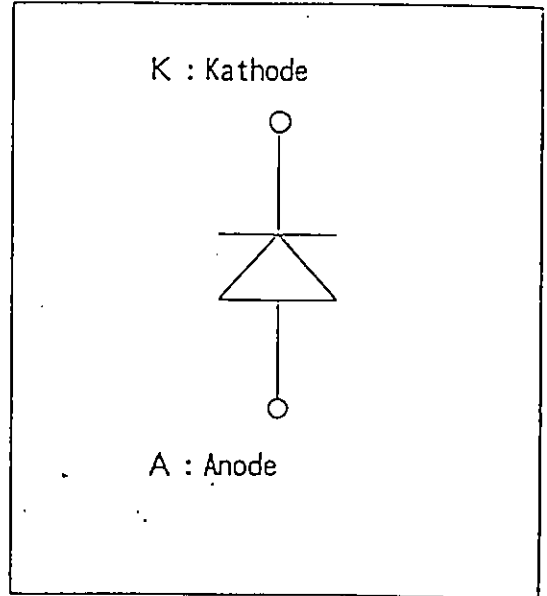
DIMENSIONS ARE IN MILLIMETERS.

CONNECTION

- Ⓚ CATHODE
- ⓐ ANODE

JEDEC : TO-247
EIAJ : SC-65

2. Equivalent circuit



3. Absolute maximum ratings (Tc=25°C)

Items	Symbols	Conditions	Ratings	Units
Repetitive Reverse Voltage	V_{RRM}	—————	1200	V
Repetitive peak surge current	I_{FM}	20kHz Duty50% Squ. wave	Tc=113°C 25	A
			Tc= 25°C 63	A
Average rectified forward current	$I_{F(AV)}$	DC	25	A
Non-repetitive peak surge current	I_{FSM}	Pulse10ms, sin wave	120	A
Maximam Power Dissipaion	P_D	—————	110	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)

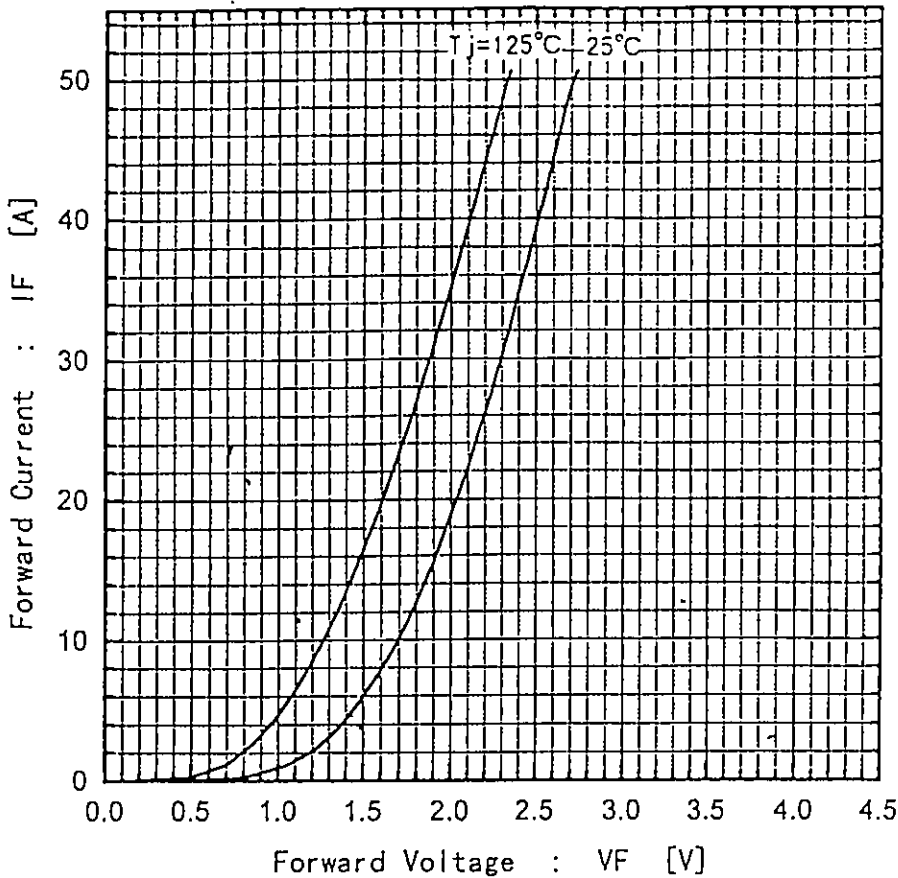
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Repetitive peak reverse voltage	V_{RRM}	1200	1350	—	$I_R = 1mA$	V
Reverse current	I_{RRM}	—	—	1.0	$V_R = 1200V$	mA
forward voltage	V_{FM}	—	—	3.0	$I_F = 25A$	V
Reverse recovery time	t_{rr}	—	—	0.3	$I_F=25A, V_R=200V$ $di/dt=100A/\mu s$	μS

5. Thermal resistance characteristics

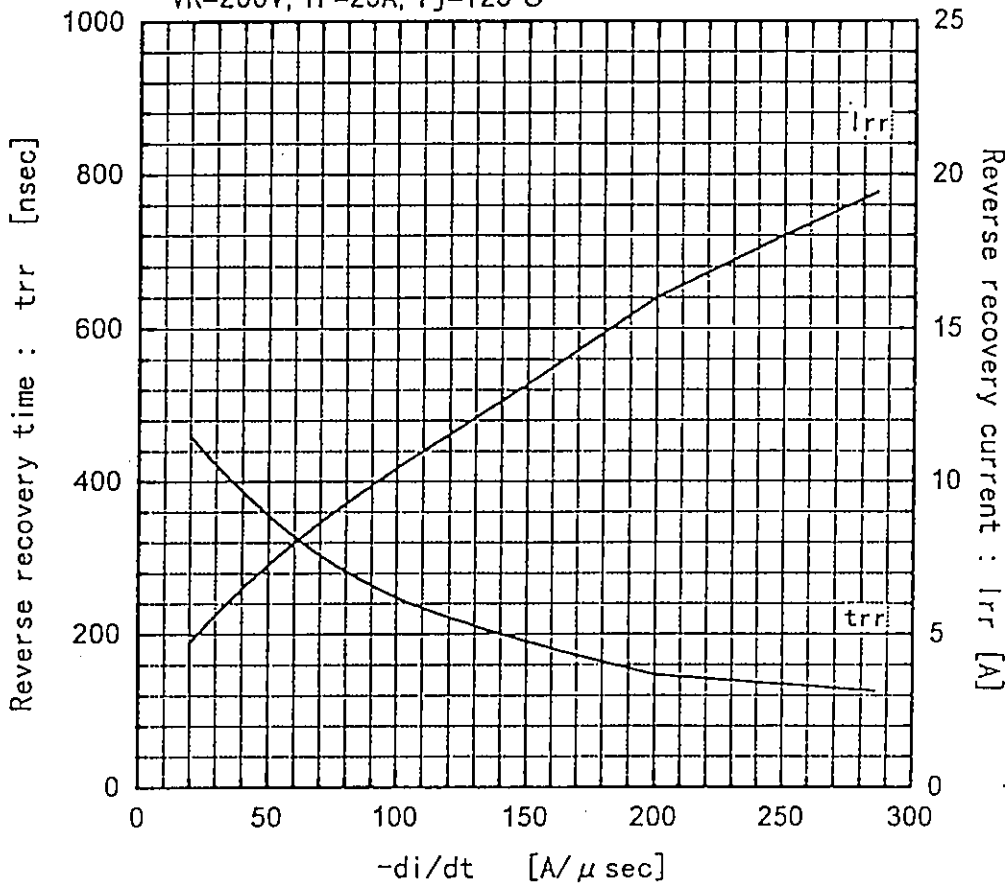
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$	—	—	1.13	junction to case	$^{\circ}C/W$

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Forward voltage vs. Forward current



Reverse recovery characteristics vs. $-di/dt$
 $V_R=200V, I_F=25A, T_j=125^\circ C$



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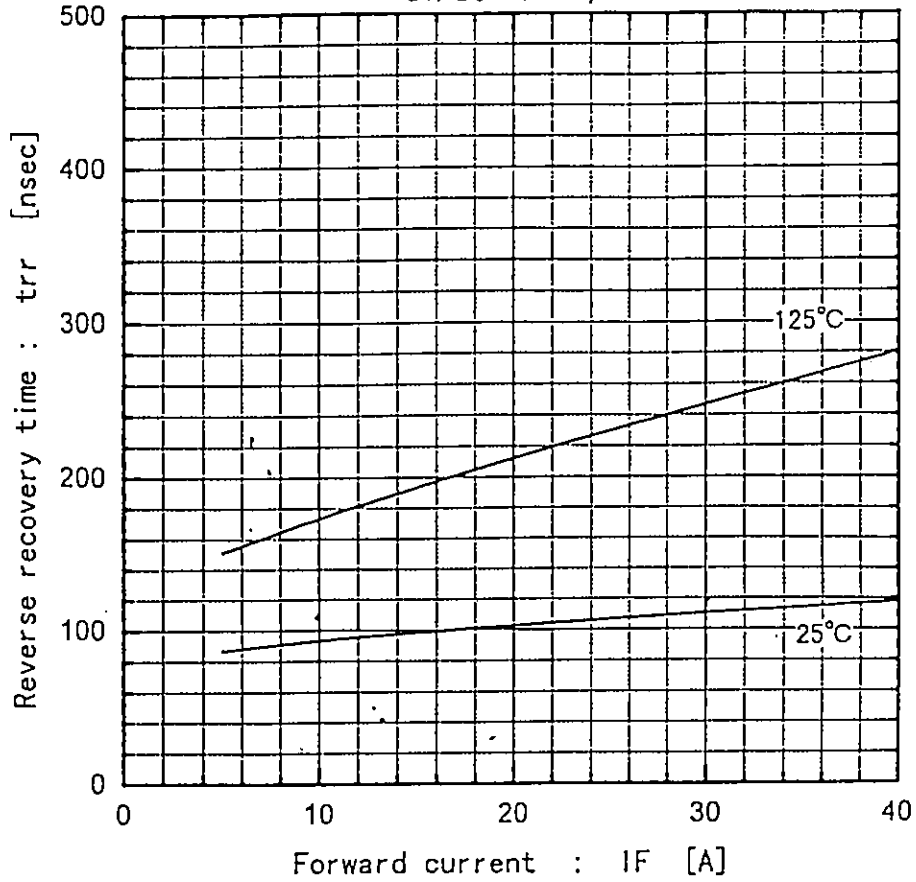
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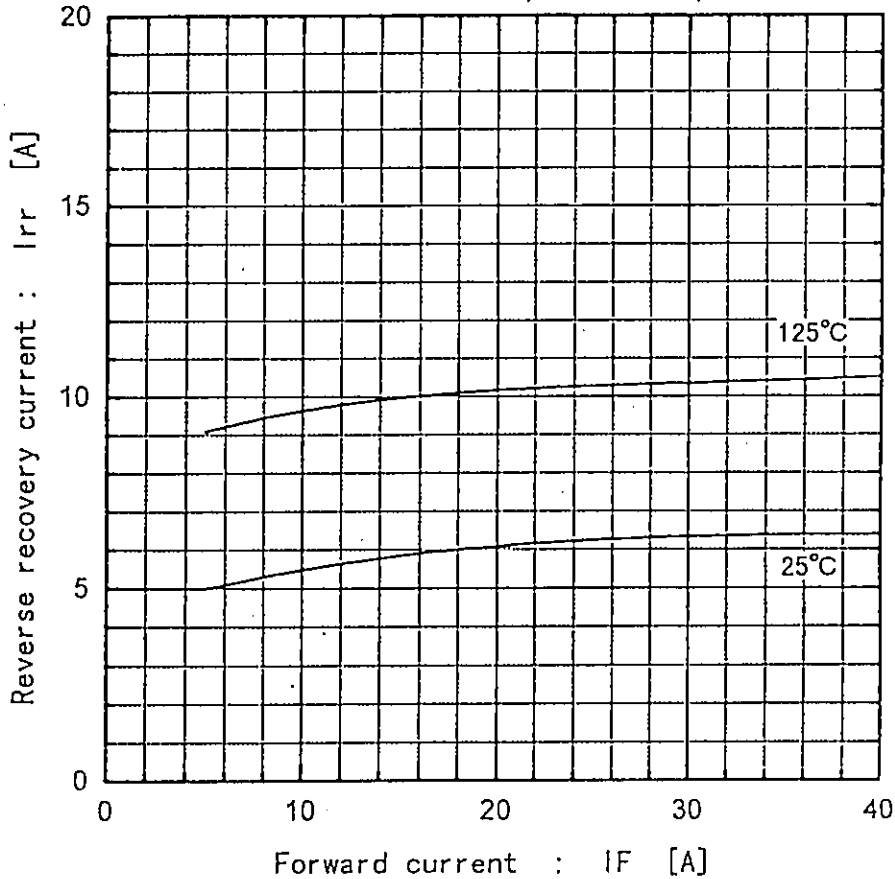
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Reverse recovery time vs. Forward current
 $-di/dt=100A/\mu\text{sec}$



Reverse recovery current vs. Forward current
 $-di/dt=100A/\mu\text{sec}$



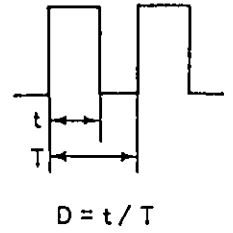
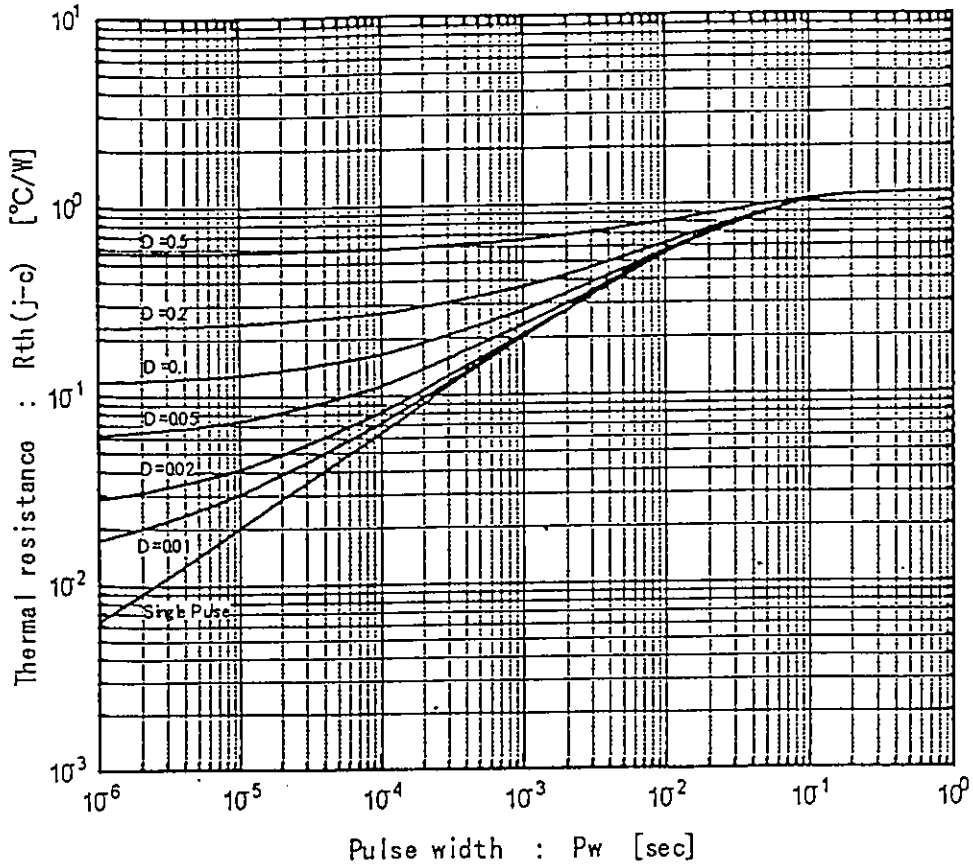
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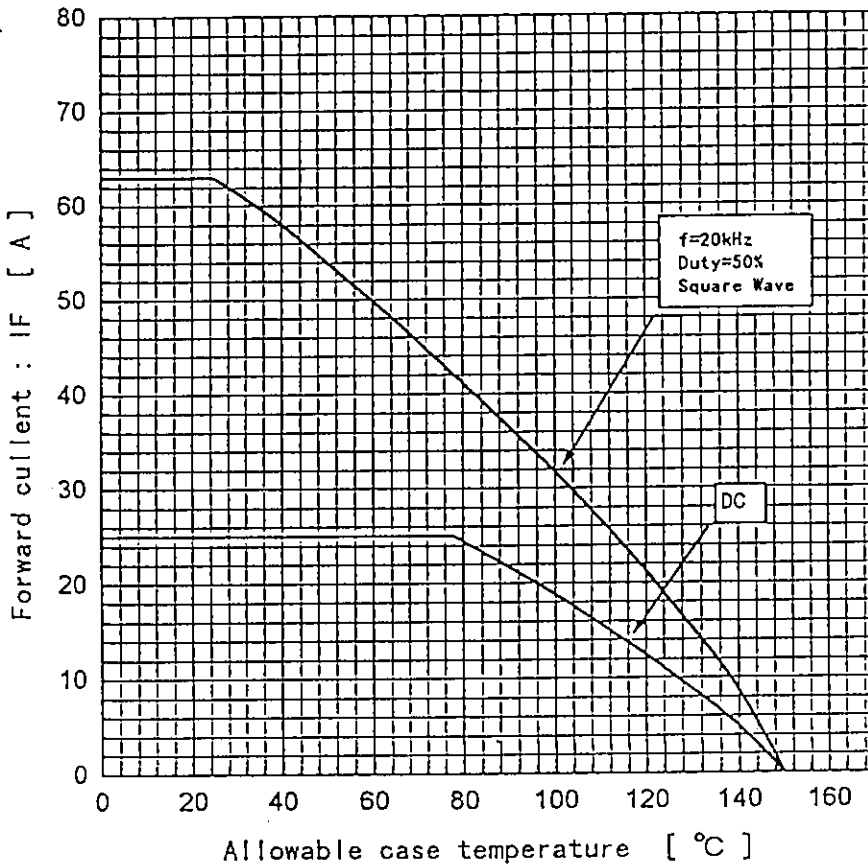
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Transient thermal resistance



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Forward current vs. Max. allowable case temperature



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