

# SPECIFICATION

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

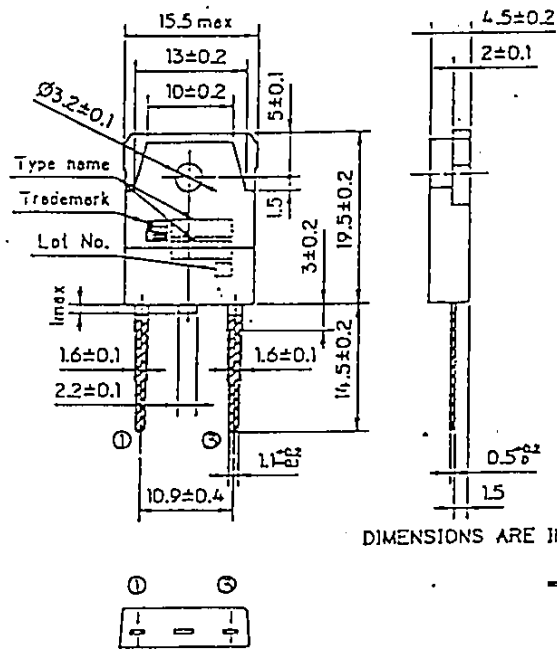
Fuji Electric Co.,Ltd.

This Specification is subject to change without notice.

	DATE	NAME	APPROVED	Fuji Electric Co.,Ltd.		
DRAWN				DWG.NO.	1/6	0
CHECKED						

ERW12-120

1. Outline Drawing



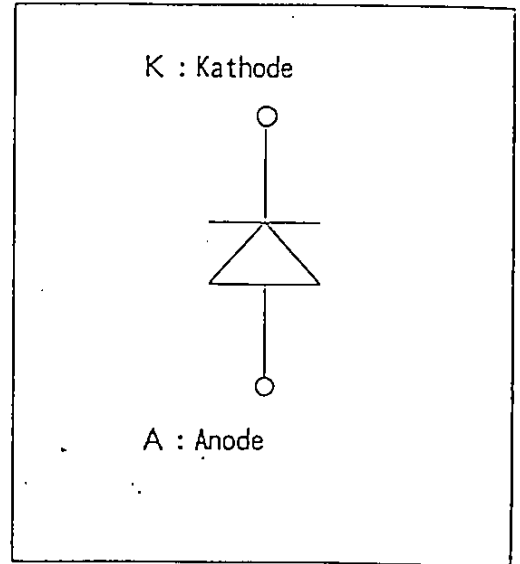
DIMENSIONS ARE IN MILLIMETERS.

CONNECTION

- ① CATHODE
- ② 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	$I_{F(AV)}$	D C	25	A
Non-repetitive peak surge current	$I_{FSM}$	Pulse10ms, sin wave	120	A
Maximam Power Dissipaion	$P_o$	—————	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 )

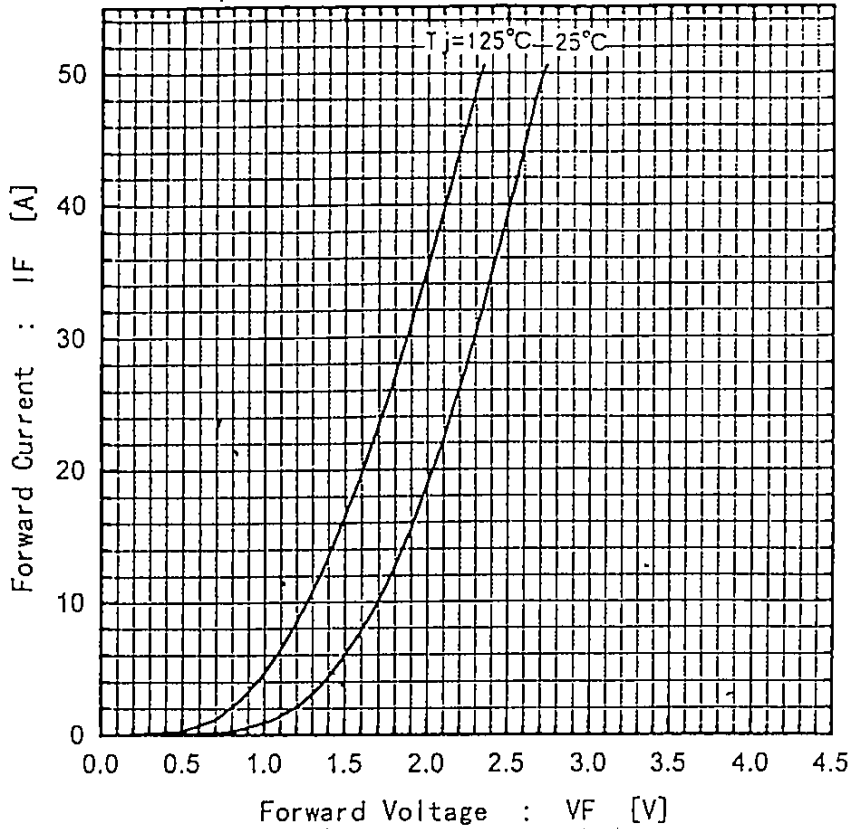
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Repetitive peak reverse voltage	$V_{RRM}$	1200	1350	—	$I_R = 1mA$	V
Reverse current	$I_{RRM}$	—	—	1.0	$V_R = 1200V$	mA
forward voltage	$V_{FM}$	—	—	3.0	$I_F = 25A$	V
Reverse recovery time	$t_{rr}$	—	—	0.3	$I_F=25A, V_R=200V$ $di/dt=100A/\mu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

5. Thermal resistance characteristics

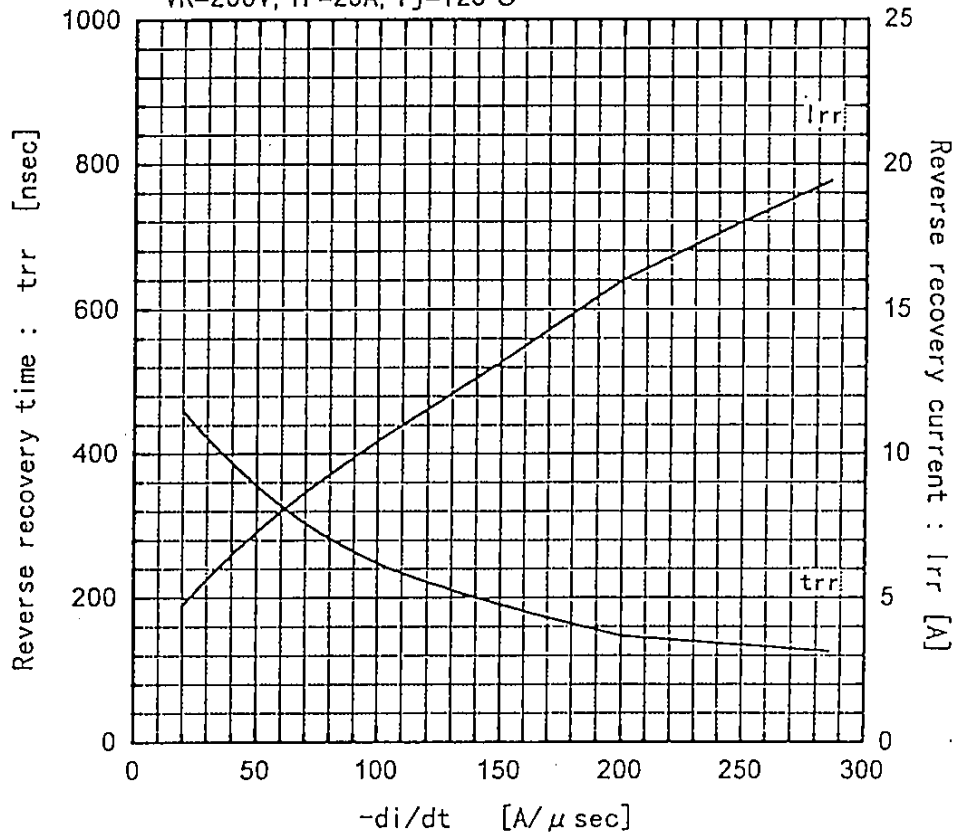
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$	—	—	1.13	junction to case	$^{\circ}C/W$

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Forward voltage vs. Forward current



Reverse recovery characteristics vs.  $-di/dt$   
 VR=200V, IF=25A, Tj=125°C



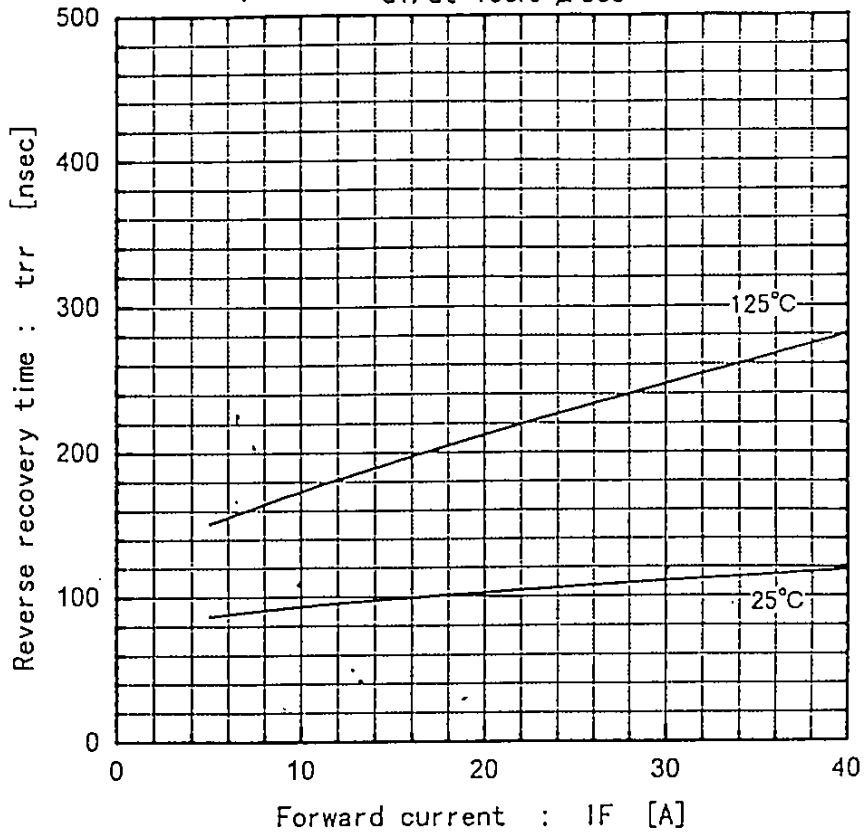
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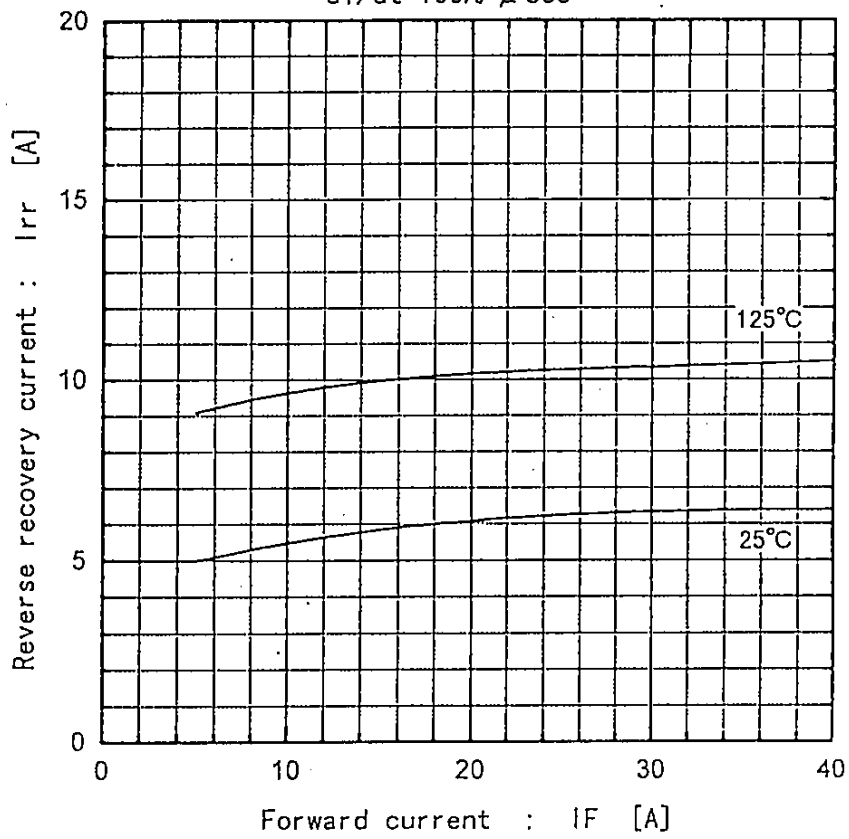
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Reverse recovery time vs. Forward current  
 $-di/dt=100A/\mu\text{sec}$



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



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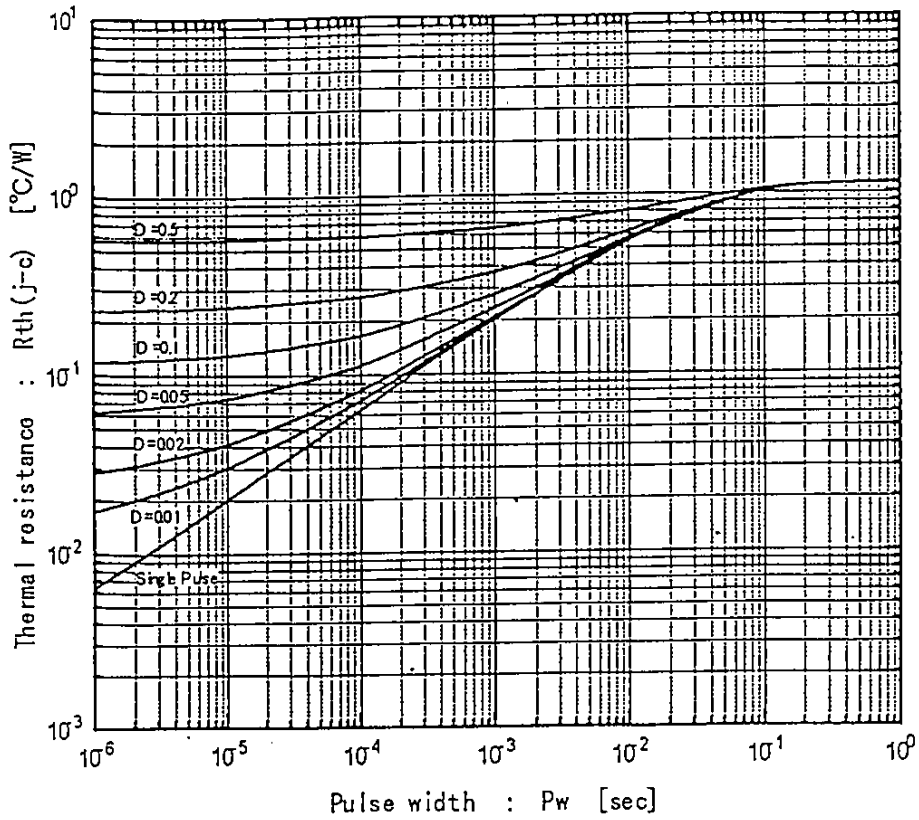
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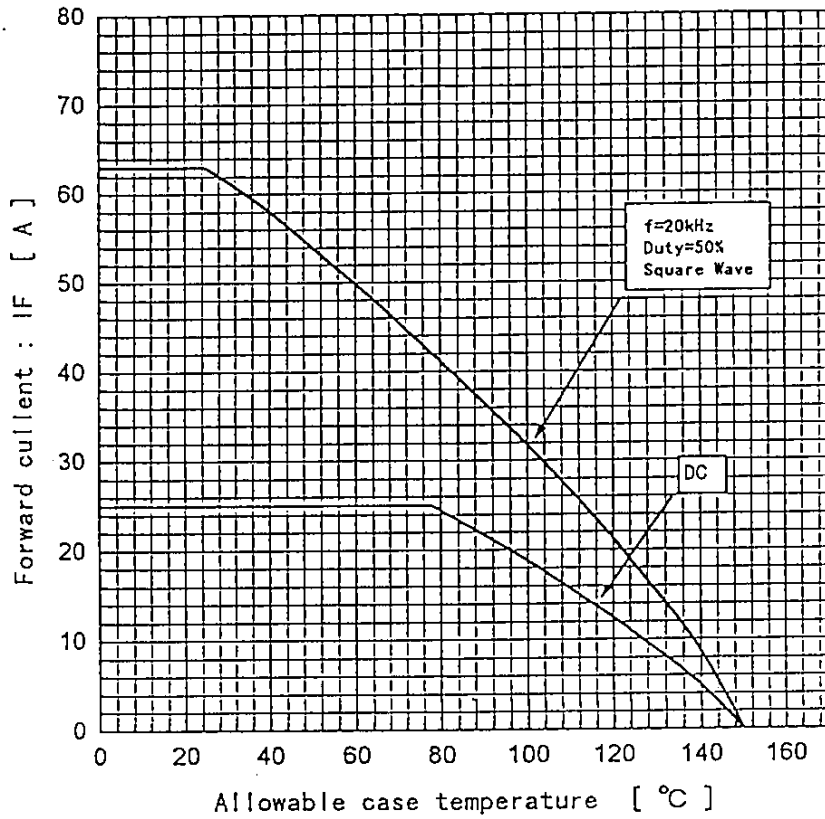
ERW12-120

Transient thermal resistance



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Forward current vs. Max. allowable case temperature



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