

SPECIFICATION

DEVICE NAME : SILICON DIODE

TYPE NAME : ERW09-120

SPEC. No. :

DATE :

Fuji Electric Co.,Ltd.

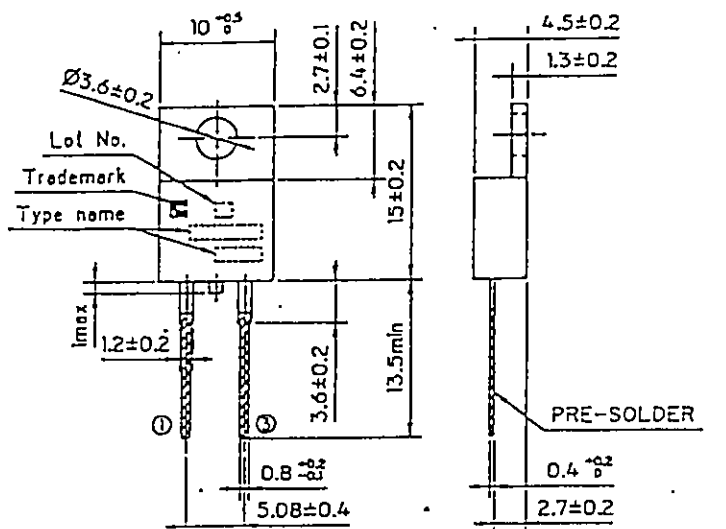
This Specification is subject to change without notice.

| | | | | | |
|---------|------|------|----------|-----------------------|-----|
| | DATE | NAME | APPROVED | Fuji Electric Co.,Ltd | |
| DRAWN | | | | DWG.NC. | 1/6 |
| CHECKED | | | | | |

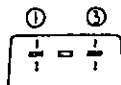


ERW09-120

1. Outline Drawing



DIMENSIONS ARE IN MILLIMETERS.

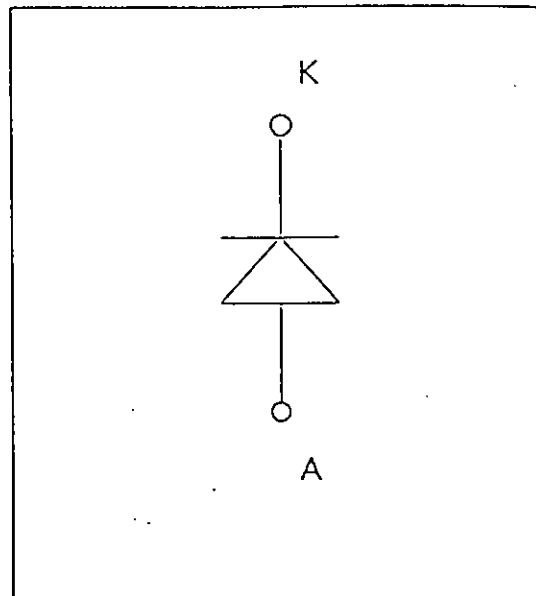


CONNECTION

- ① CATHODE
- ② ANODE

JEDEC : TO-220AG

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=124°C 8 | A |
| | | | Tc= 25°C 26 | A |
| Average rectified forward current | $I_{F(AV)}$ | DC | 8 | A |
| Non-repetitive peak surge current | I_{FSM} | Pulse10ms, sin wave | 72 | A |
| Maximam Power Dissipaion | P_D | ————— | 50 | 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)

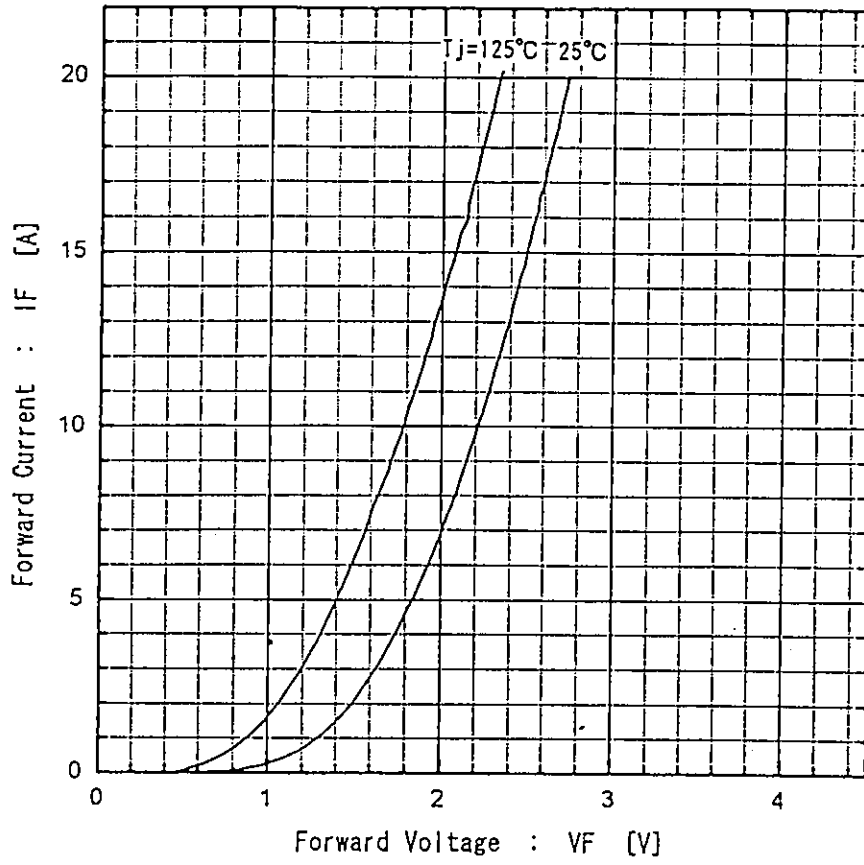
| Items | Symbols | Characteristics | | | Conditions | Unit |
|-----------------------|----------|-----------------|------|------|---|---------------|
| | | min. | typ. | max. | | |
| Reverse Current | I_R | — | — | 1.0 | $V_R = 1200\text{V}$ | mA |
| forward voltage | V_F | — | — | 3.0 | $I_F = 8\text{A}$ | V |
| Reverse recovery time | t_{rr} | — | — | 0.3 | $I_F = 8\text{A}, V_R = 200\text{V}$ $di/dt = 100\text{A}/\mu\text{s}$ | μs |

5. Thermal resistance characteristics

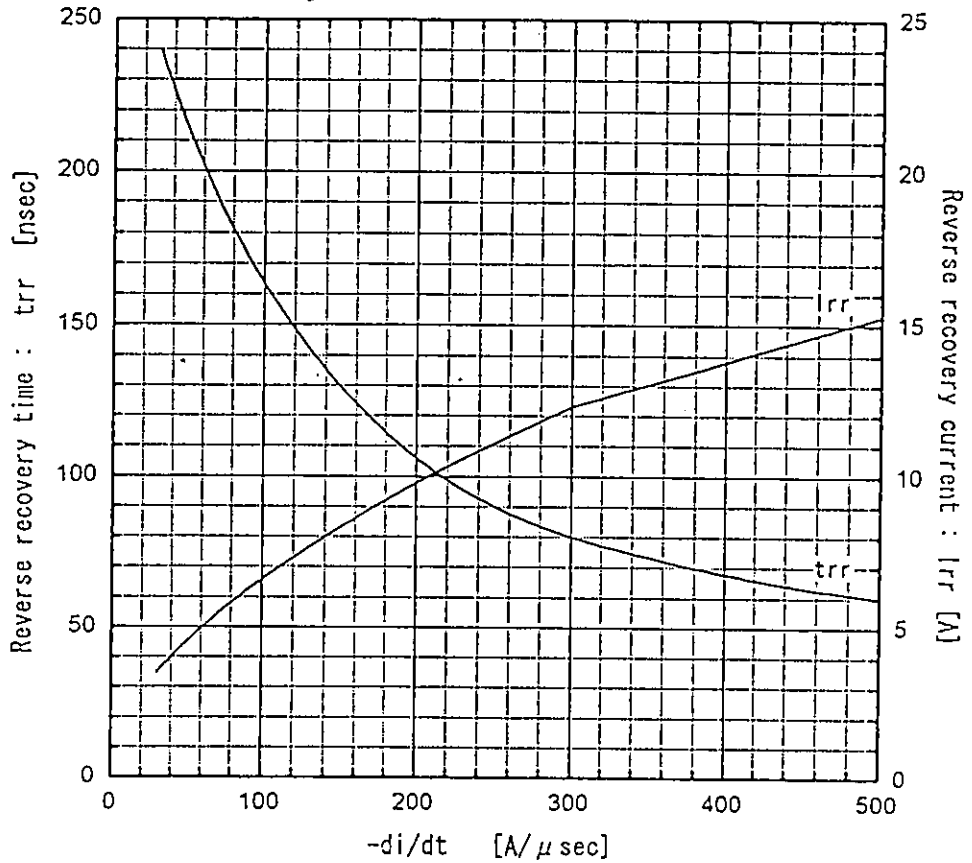
| Items | Symbols | Characteristics | | | Conditions | Unit |
|--------------------|---------------|-----------------|------|------|------------------|-----------------------------|
| | | min. | typ. | max. | | |
| Thermal resistance | $R_{th(j-c)}$ | — | — | 2.50 | junction to case | $^{\circ}\text{C}/\text{W}$ |

This material and the information herein is the property of Fuji Electric Co., Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party, nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

Forward voltage vs. Forward current

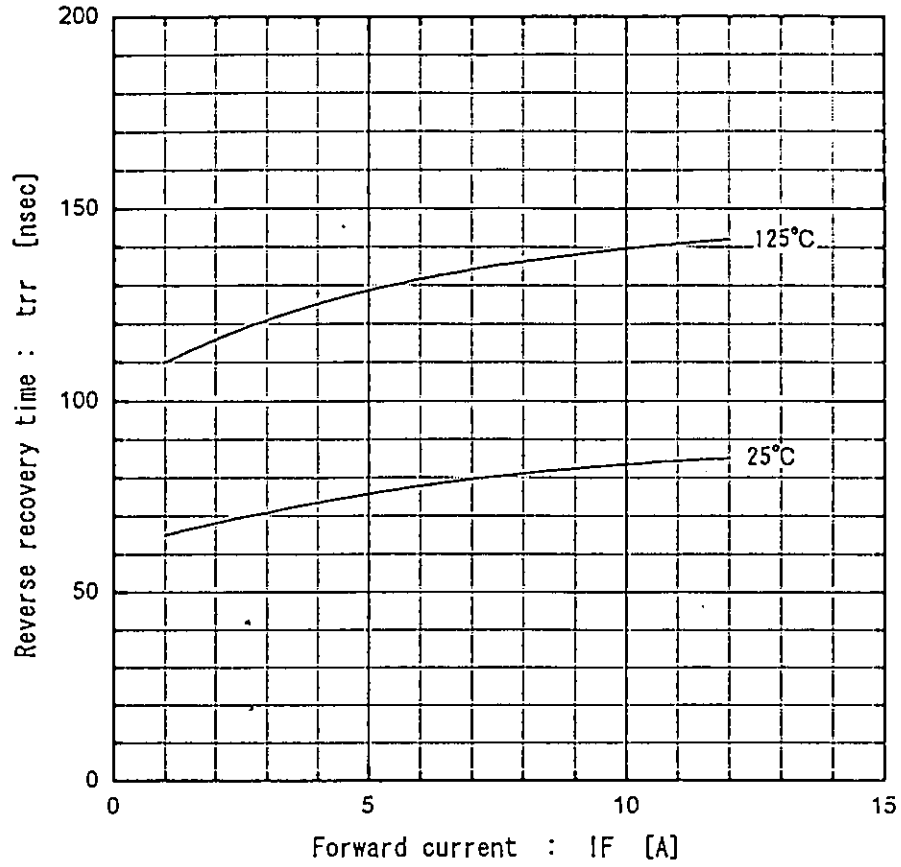


Reverse recovery characteristics vs. $-di/dt$
IF=8A, Tj=125°C

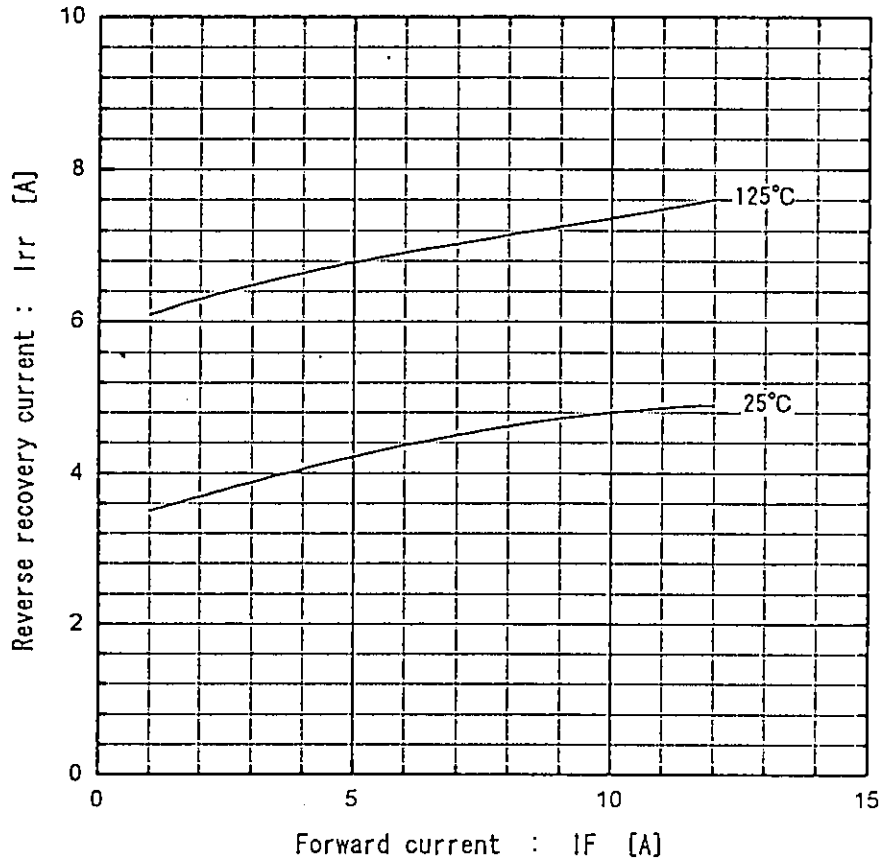


This material and the information herein is the property of Fuji Electric Co. Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

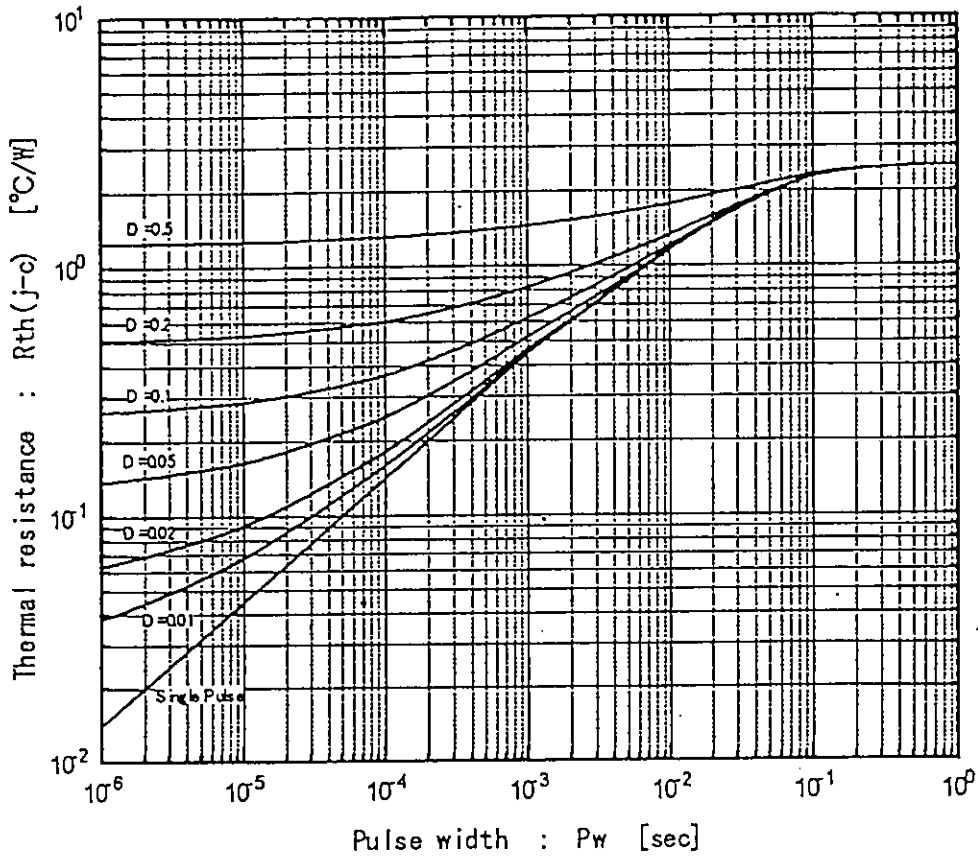
Reverse recovery time vs. Forward current
 $V_R=200V, -di/dt=100A/\mu sec$



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

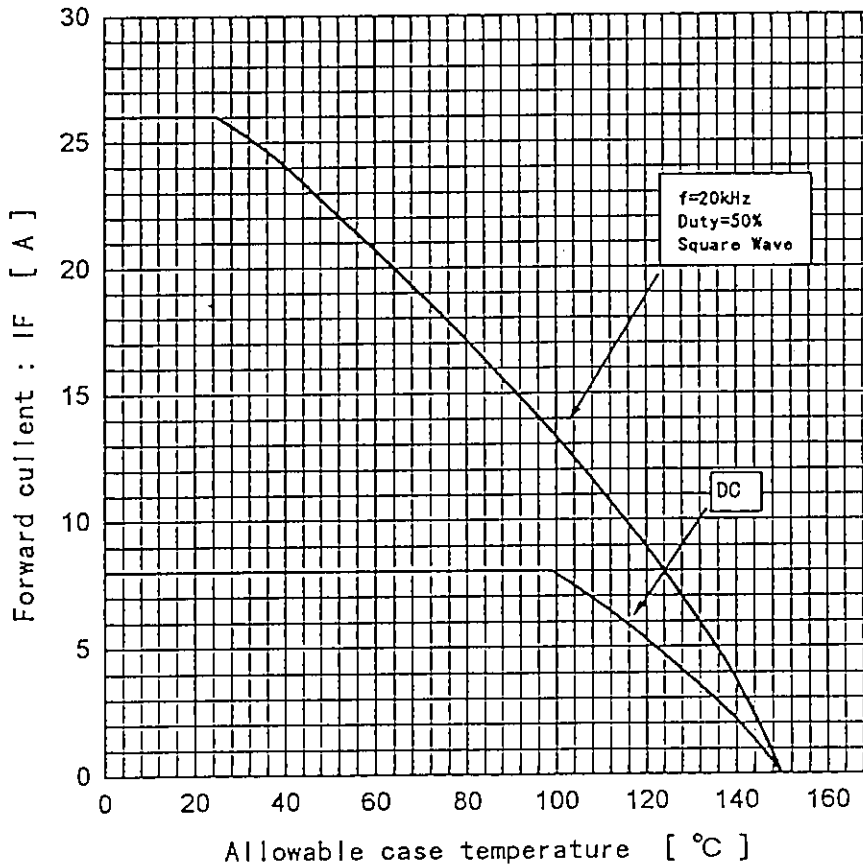


ERW09-120
Transient thermal resistance



This material and the information herein is the property of Fuji Electric Co., Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

Forward current vs. Max. allowable case temperature



For more information, contact:

Collmer Semiconductor, Inc.

P.O. Box 702708

Dallas, TX 75370

972-733-1700

972-381-9991 Fax

<http://www.collmer.com>