

SPECIFICATION

Device Name : SILICON DIODE

Type Name : ERW13-060

Spec. No. :

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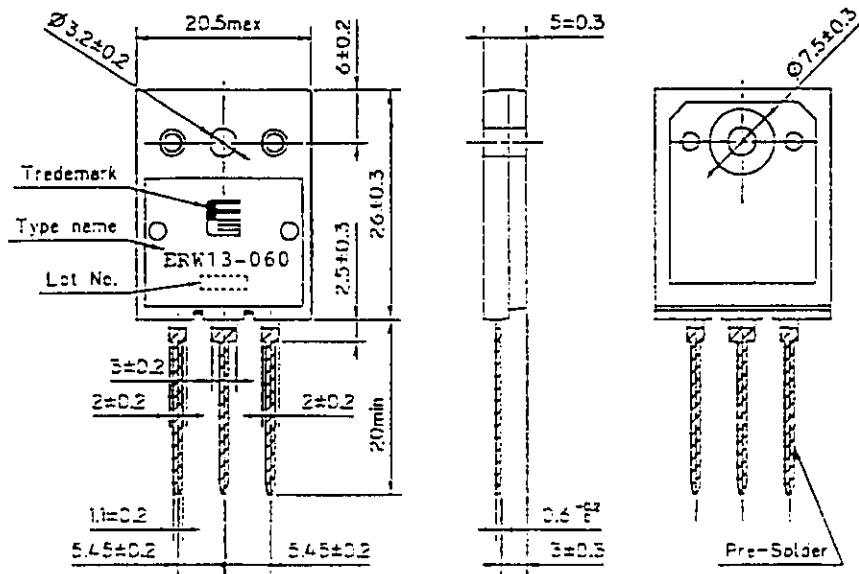
Fuji Electric Co.,Ltd.
Matsumoto Factory

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

Ratings and characteristics of Fuji silicon diode

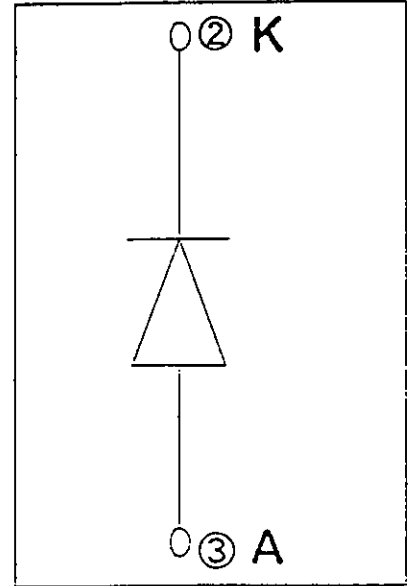
ERW13-060

1. Outline Drawing



① ② ③

2. Equivalent circuit



Connection

- ① Open
- ② Cathode
- ③ Anode

3. Absolute maximum ratings (Tc=25°C)

Items	Symbols		Ratings	Unit	
Repetitive Reverse Voltage	VRRM	-	600	V	
Repetitive Peak Surge Current	IFM	20kHz, Duty 50%	Tc= 90°C	50	A
		Squ. wave	Tc= 25°C	88	A
Average Rectified Forward Current	IF(AV)	DC	54	A	
Non-repetitive Peak Surge Current	IFSM	Pulse 10ms, sin wave	125	A	
Maximum Power Dissipation	PD	-	140	W	
Operating Temperature	Tj	-	+150	°C	
Storage Temperature	Tstg	-	-40~+150	°C	
Mounting Screw Torque	-	-	70	N·cm	

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4. Electrical Characteristics (at Tc=25°C unless otherwise specified)

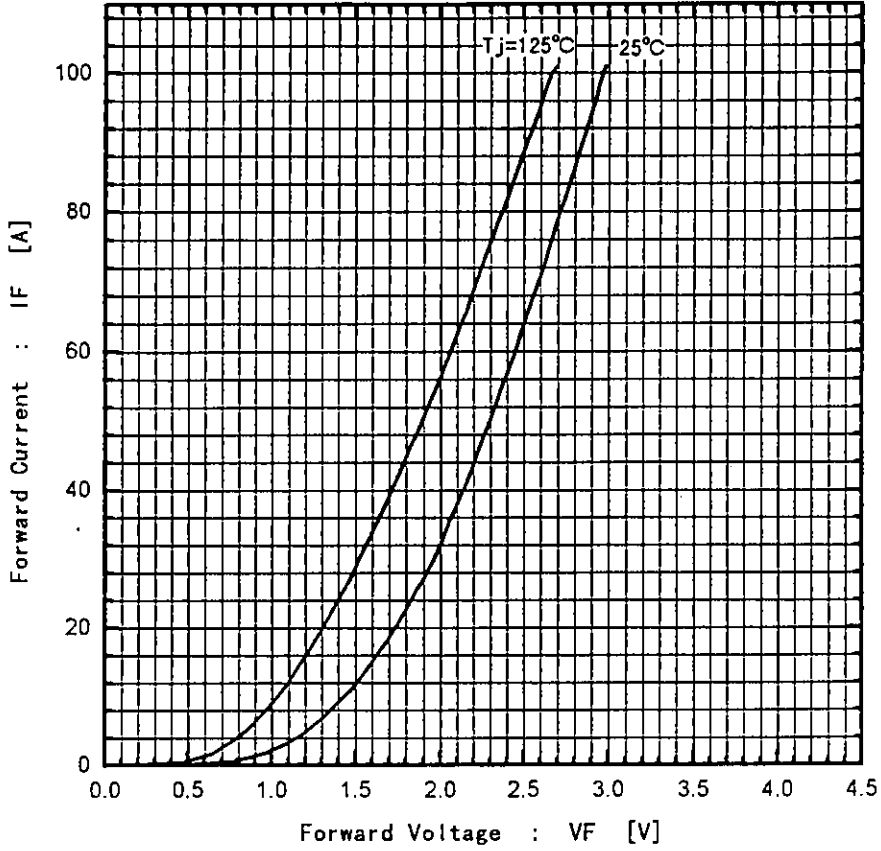
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Reverse Current	IR	-	-	1.0	VR=600V	mA
Forward Voltage	VF	-	-	3.0	IF=50A	V
Reverse Recovery Time	trr	-	-	0.3	IF=50A, VR=200V di/dt=100A/μs	μs

5. Thermal Resistance Characteristics

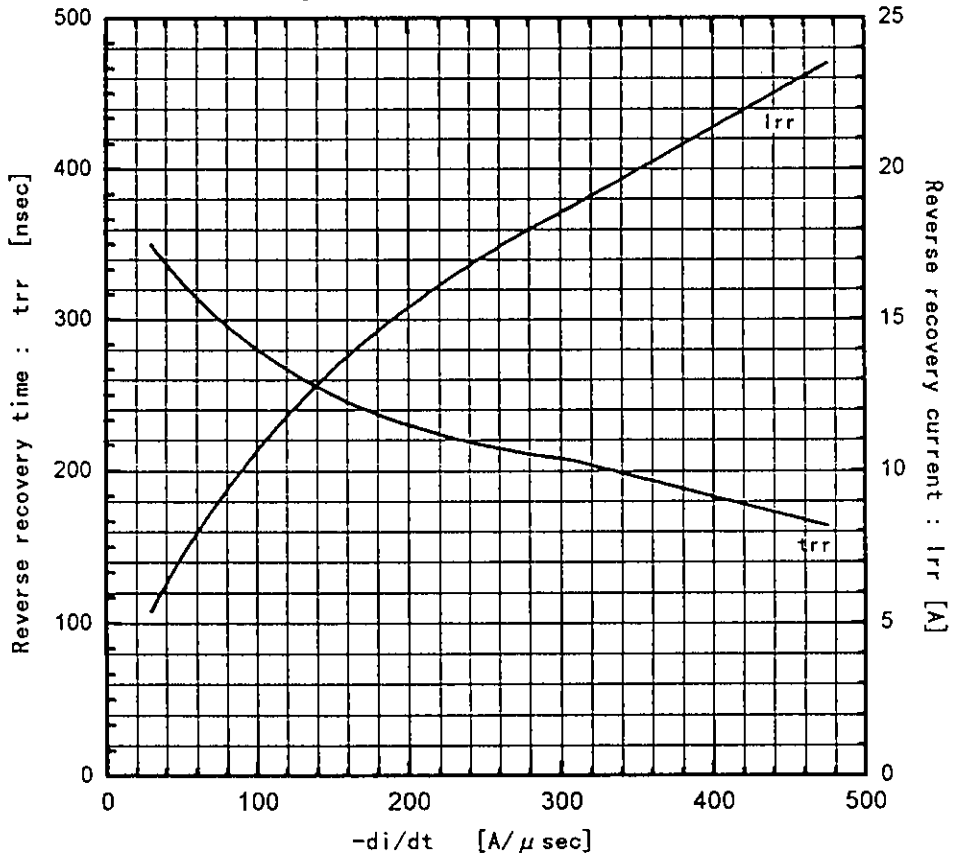
Items	Symbols	Characteristics			Conditions	Unit
		min.	typ.	max.		
Thermal resistance	Rth(j-c)	-	-	0.89	junction to case	°C/W

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Forward voltage vs. Forward current



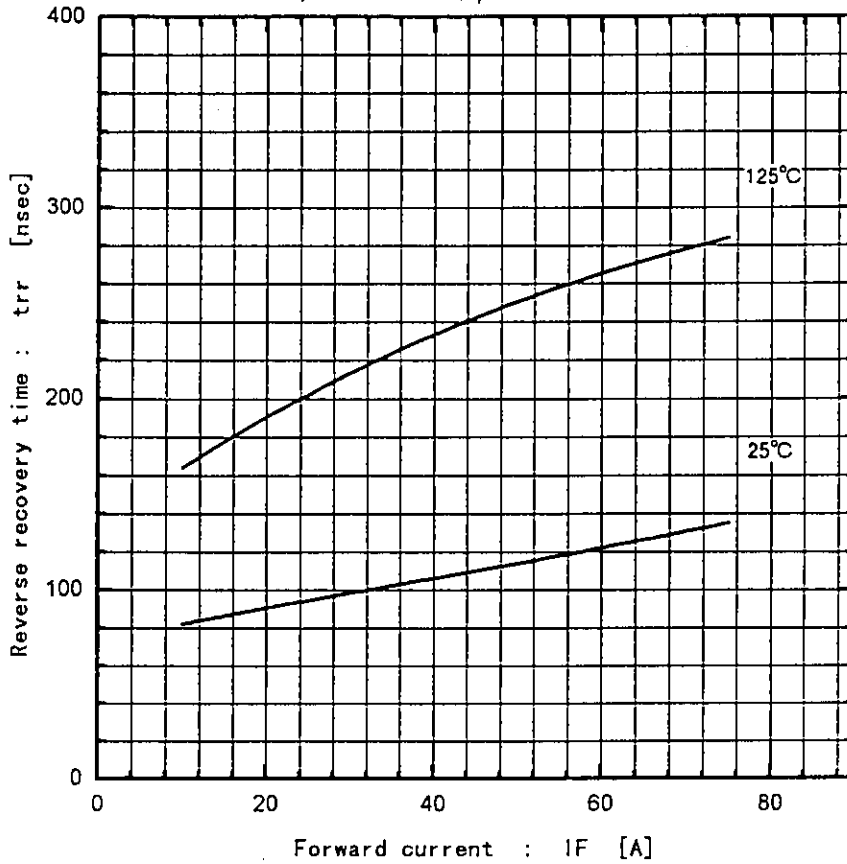
Reverse recovery characteristics vs. $-di/dt$
IF=50A, Tj=125°C



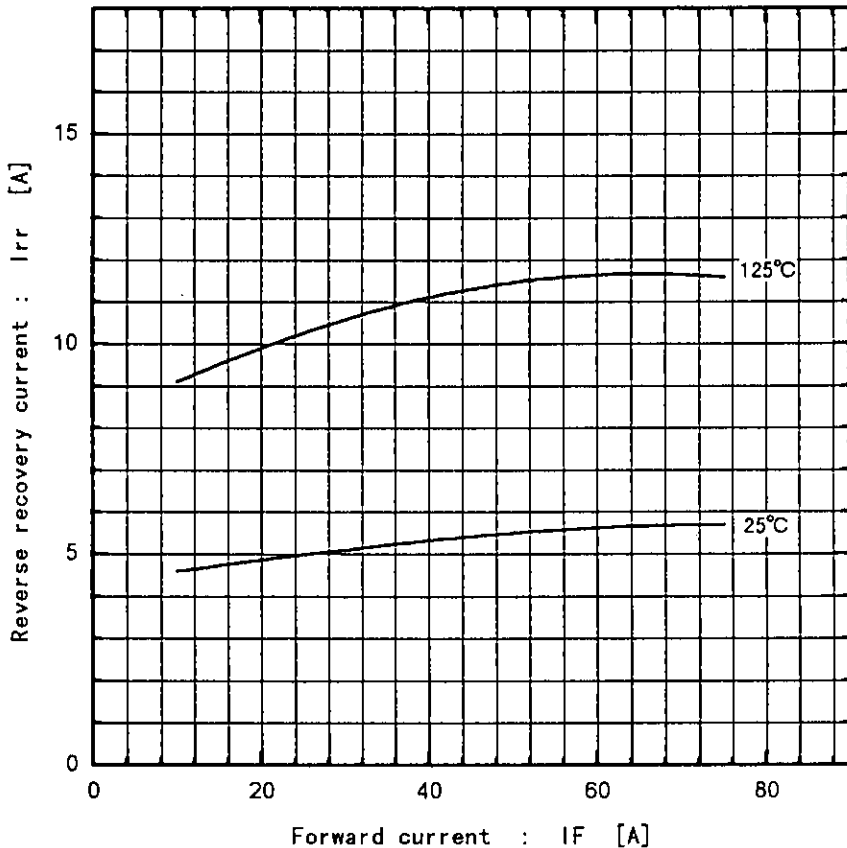
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Reverse recovery time vs. Forward current
VR=200V, $-di/dt=100A/\mu\text{sec}$

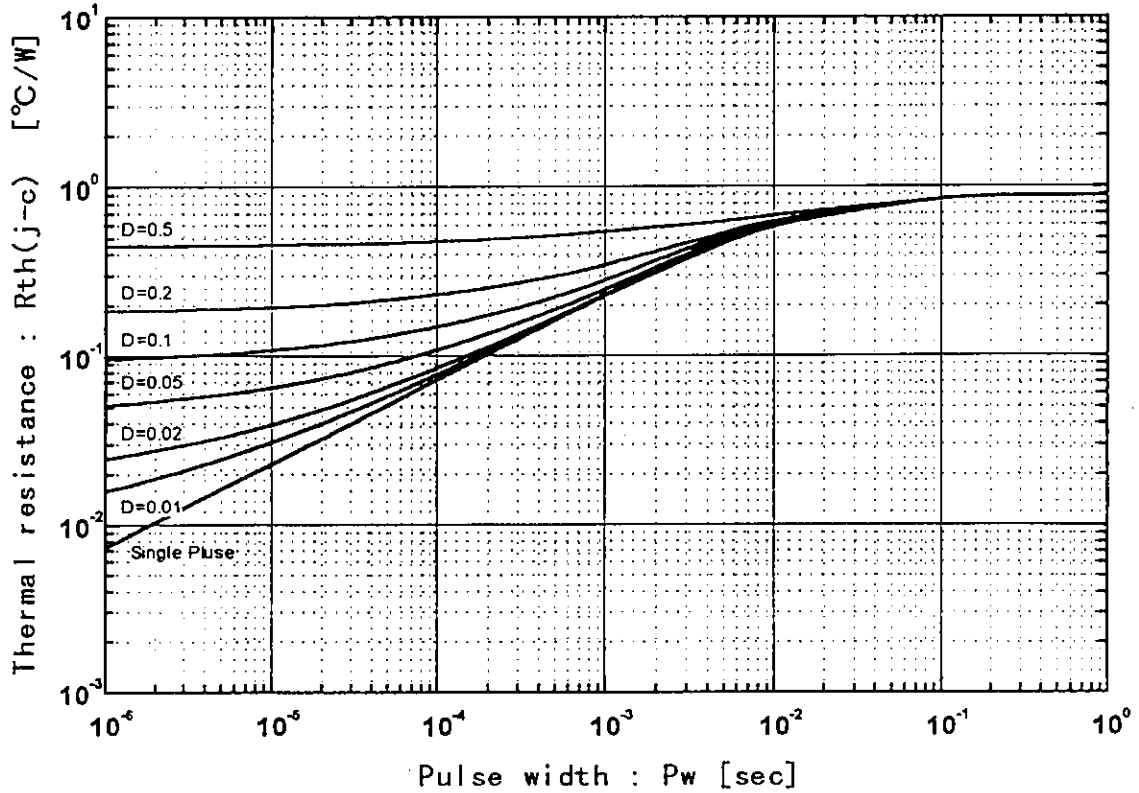


Reverse recovery current vs. Forward current
VR=200V, $-di/dt=100A/\mu\text{sec}$



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ERW13-060 Transient thermal resistance



Forward current vs. Max. allowable case temperature

