

# SPECIFICATION

Device Name : High Voltage Silicon Diode  
Type Name : ESJA53-20A  
Spec. No. :

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Fuji Electric Co., Ltd.  
 Matsumoto Factory

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

## 1. SCOPE

This specification provide the ratings and the requirements for high voltage silicon diode ESJA53-20A made by FUJI ELECTRIC CO.,LTD.

## 2. OUT VIEW

Shape and dimensions are described in Fig.3.

## 3. IDENTIFICATION

The diode shall be marked with Cathode Mark and Lot No..

## 4. RATINGS AND CHARACTERISTICS

### 4.1 ABSOLUTE MAX. RATINGS. ( Ta=25 °C unless otherwise noted. )

Items	Conditions	Symbols	Ratings	Units
Repetitive peak reverse voltage.		$V_{RRM}$	20	kVpeak
Non-Repetitive peak forward current.	50Hz Sine-half wave peak value	$I_{FSM}$	0.5	Apeak
Average forward current.	50Hz Sine Wave	$I_{AV}$	5	mA
Allowable junction temperature.		$T_j$	120	°C
Storage temperature range.		$T_{stg}$	-40~120	°C
Allowable operating case temperature.		$T_c$	100	°C

### 4.2 ELECTRICAL CHARACTERISTICS ( Ta=25 °C unless otherwise noted. )

Items	Conditions	Symbols	Ratings	Units
Maximum forward voltage drop	$I_F=10mA$	$V_F$	75	V
Maximum reverse current	$V_R=20kV$	$I_{R1}$	2	$\mu A$
Maximum reverse current	$V_R=20kV, 100^\circ C$	$I_{R2}$	5	$\mu A$
Maximum reverse recovery time	$I_F=2mA, I_R=4mA$	$t_{rr}$	0.08	$\mu S$
Maximum junction capacitance	$f=1MHz, V_R=0V$	$C_j$	1	pF

### 4.3 MECHANICAL CHARACTERISTICS

Weight : Ca. 0.3 gr.

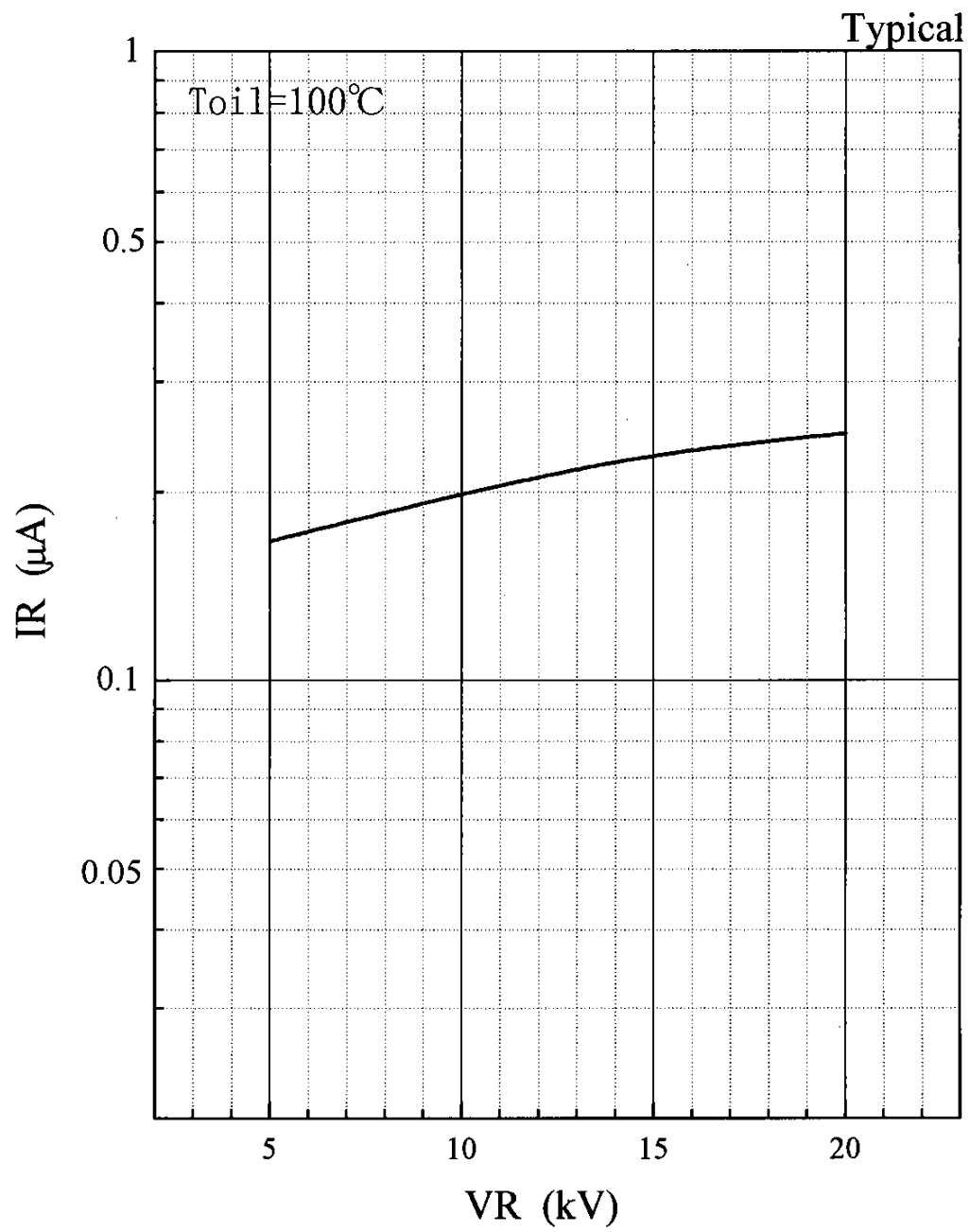
Vibration proof : 5 G

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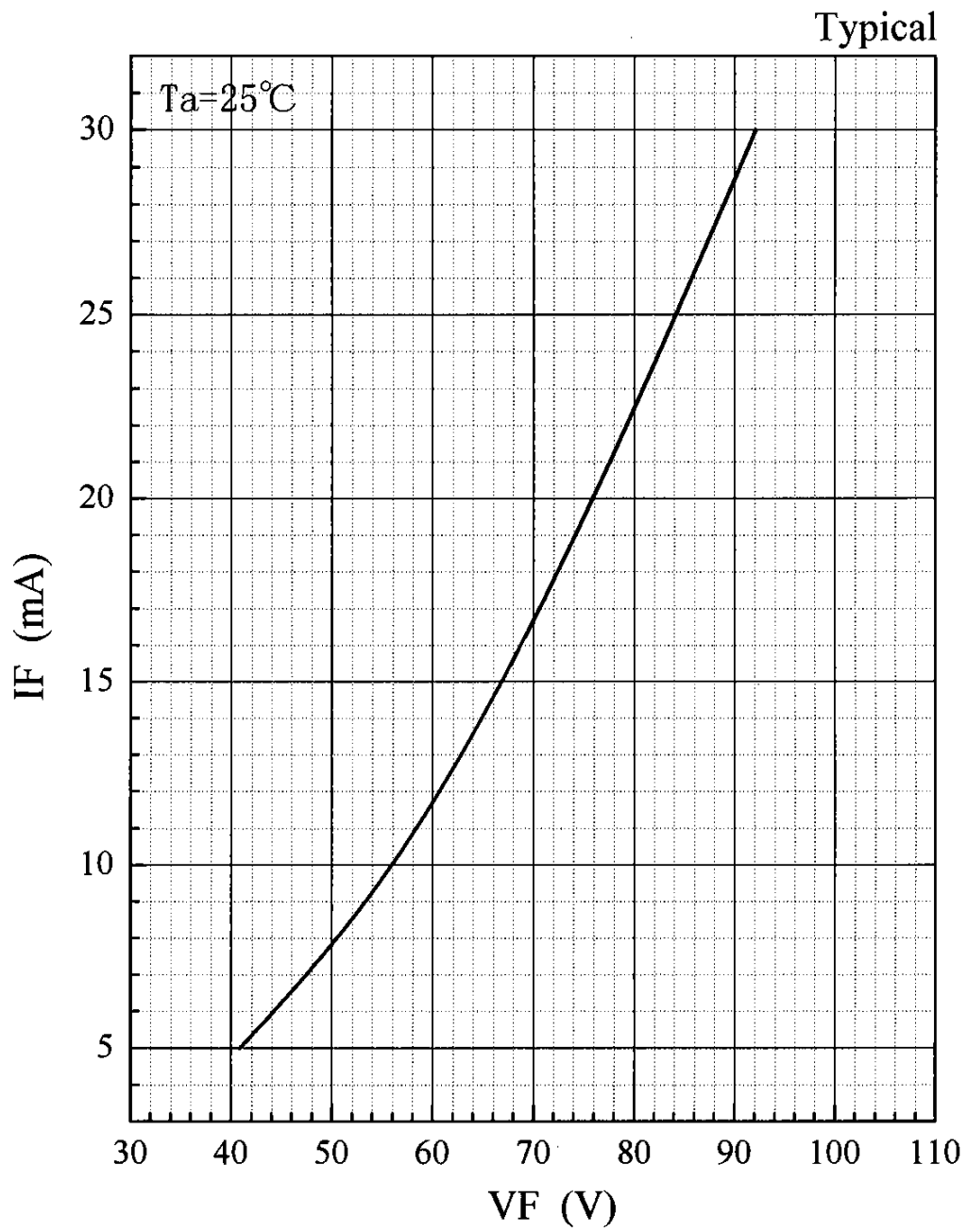
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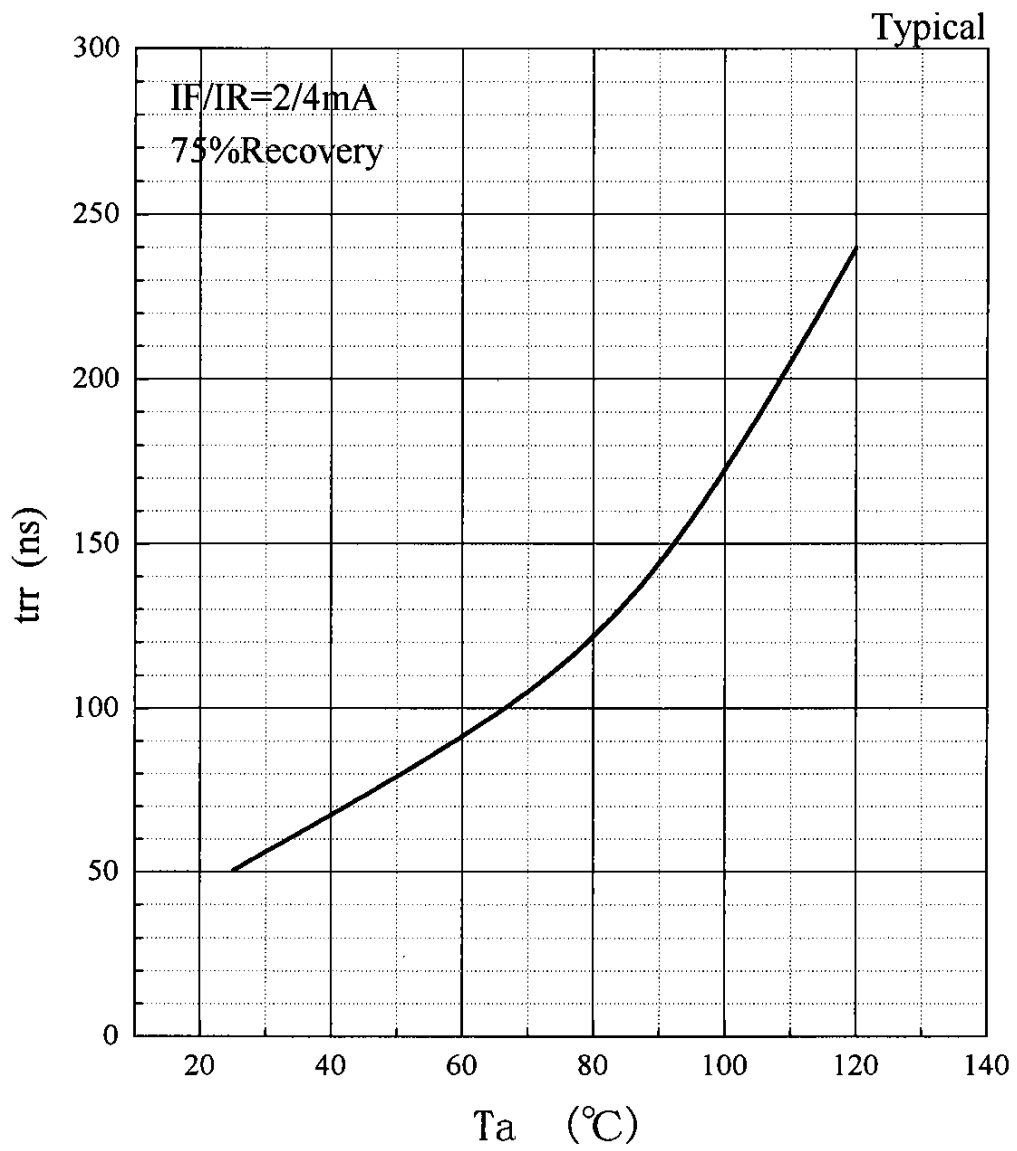
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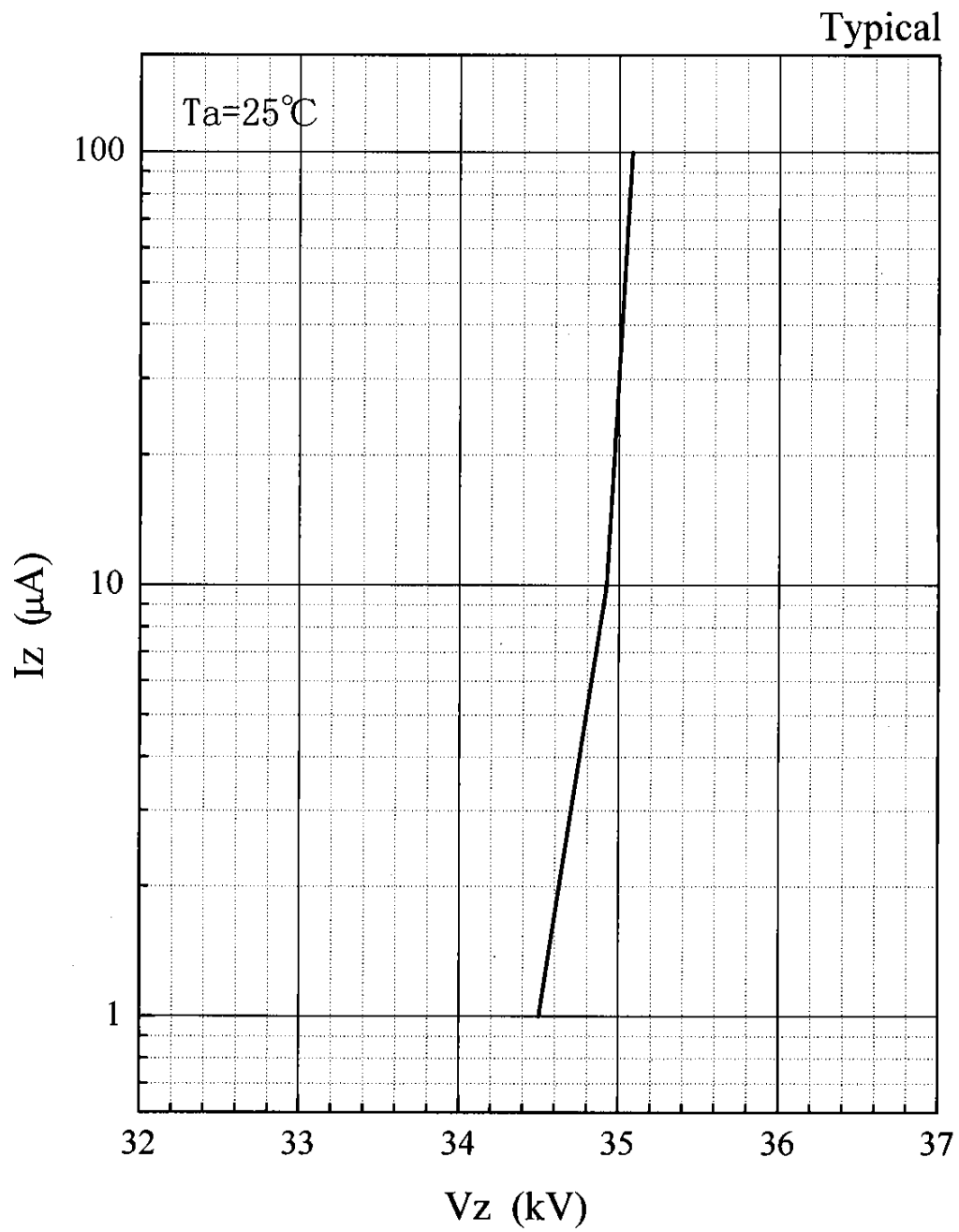
*Fig.2 Reverse characteristic[VR-IR]*



*Fig.1 Forward characteristic[VF-IF]*



*Fig.4 Reverse recovery time characteristic[Ta-trr]*



*Fig.3 Avalanche characteristic [ $V_z$ - $I_z$ ]*

Dimensions

Unit : mm

ESJA53-□□A

