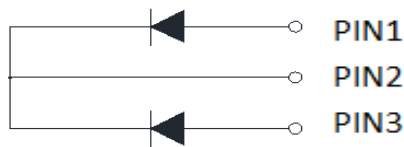
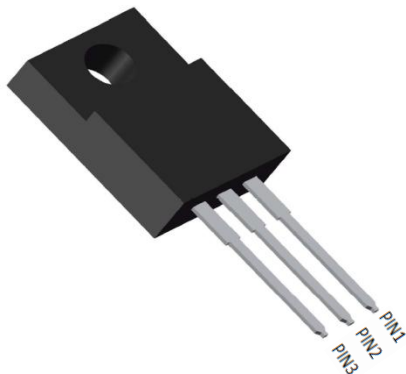


Ultra-Fast Recovery Rectifier Diodes



Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** ITO-220AB
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■ Limiting Values (Absolute Maximum Rating)

PARAMETER	SYMBOL	UNIT	SFA1040FCT-B1-0000S
Device Marking Code			SFA1040FCT
Repetitive Peak Reverse Voltage	VRRM	V	400
Maximum RMS Voltage	VRMS	V	280
Maximum DC blocking Voltage	VDC	V	400
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1)	Io	A	10
Surge(Non-repetitive)Forward Current @60Hz half-sine wave, 1 cycle, Ta=25°C	IFSM	A	100
Current Squared Time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I ² t	A ² s	41
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SFA1040FCT-B1-0000S
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=5.0A	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM1	uA	VRM=VRRM Ta=25°C	10
	IRRM2		VRM=VRRM Ta=125°C	500
Reverse Recovery Time	Trr	ns	IF=0.5A I _{RM} =1A I _{RR} =0.25A	35
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	45



SFA1040FCT-B1-0000S

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	SFA1040FCT-B1-0000S
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	4

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SFA1040FCT-B1-0000S	Approximate 1.48	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

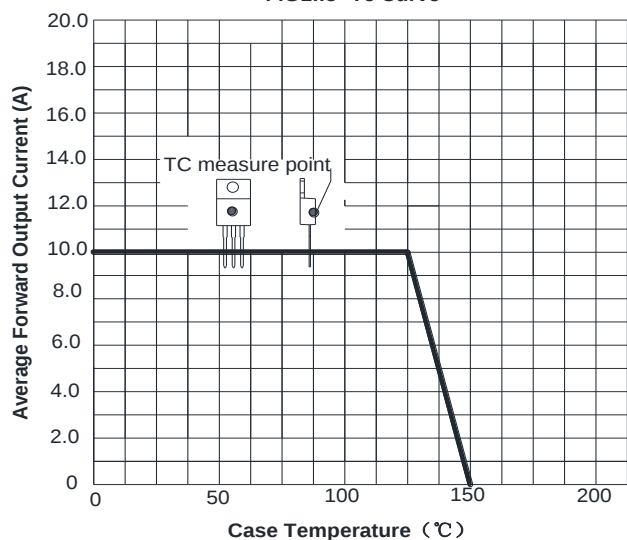


FIG2: Surge Forward Current Capability

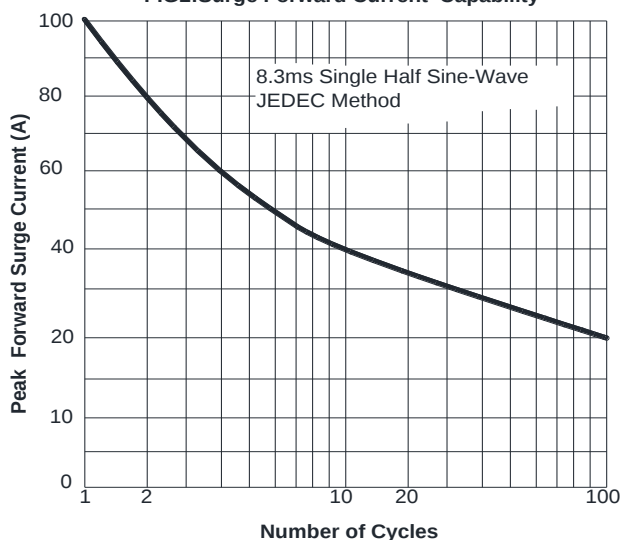


FIG3: Forward Voltage

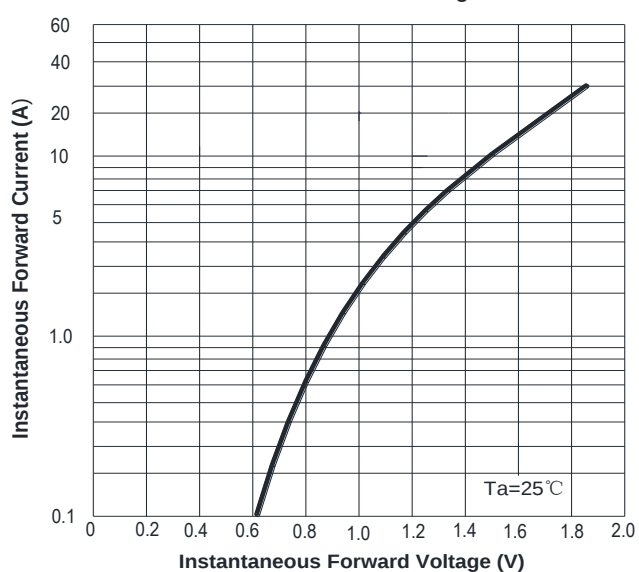
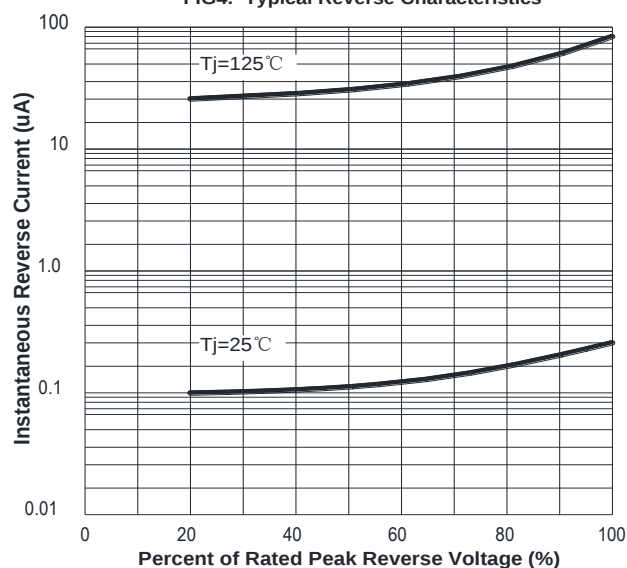
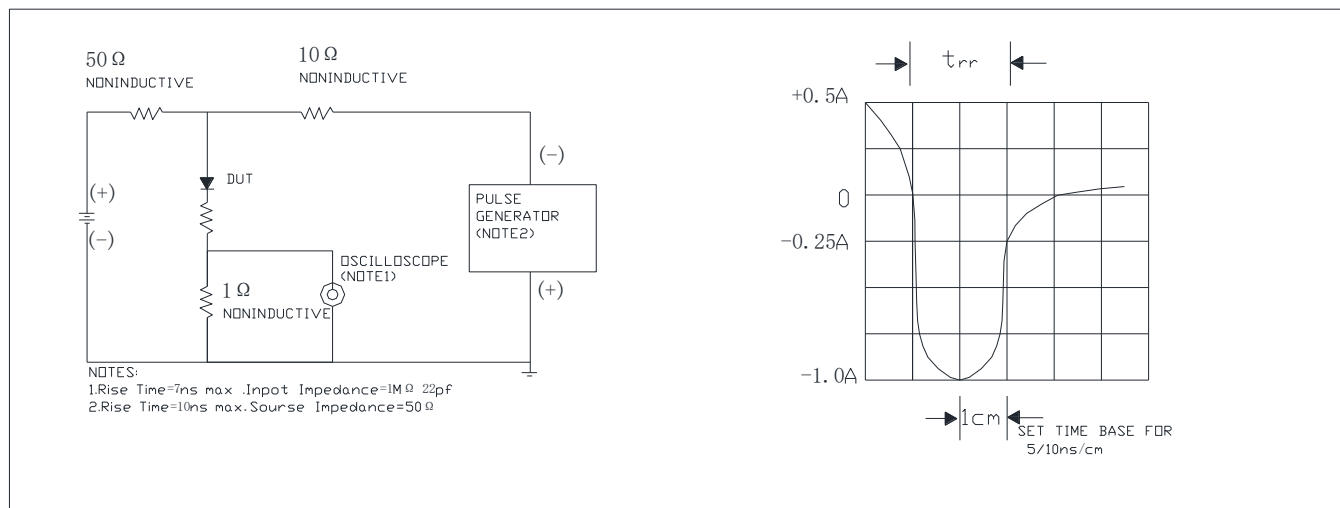


FIG4: Typical Reverse Characteristics

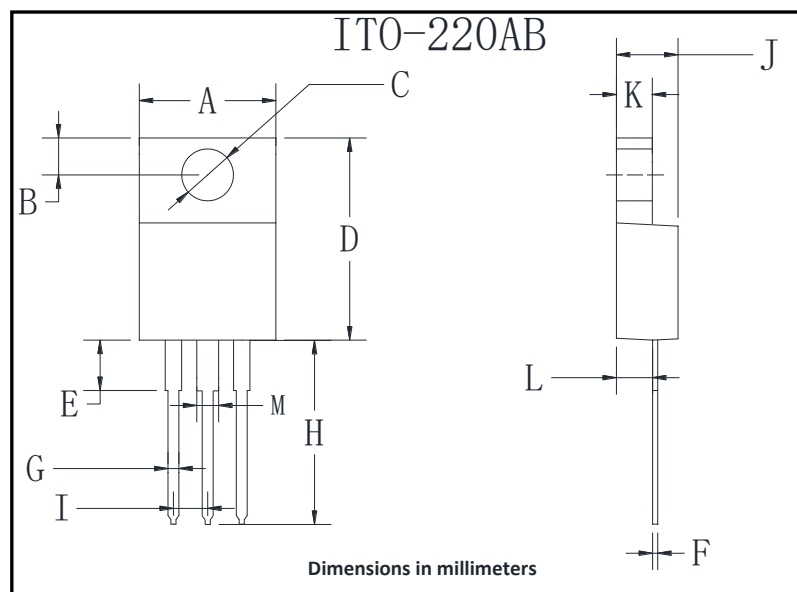


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FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



ITO-220AB		
Dim	Min	Max
A	9.7	10.7
B	2.15	3.25
C	2.6	3.8
D	14.4	15.9
E	3.1	4.5
F	0.4	0.8
G	0.4	0.8
H	12.7	14.2
I	1.80	2.95
J	3.9	5.1
K	2.1	3.56
L	2.1	3.2
M	1.4	1.8



SFA1040FCT-B1-0000S

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