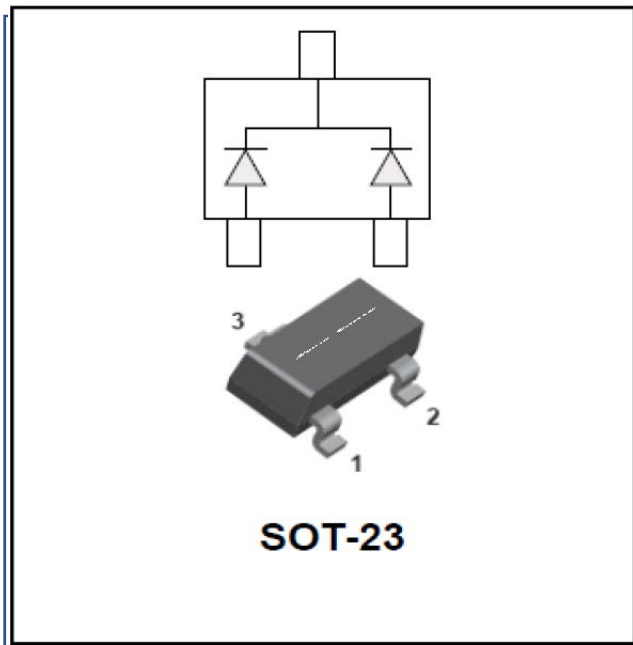


SBT0540C

Schottky Barrier Diode



Features

- Moisture sensitivity level 1
- Reverse voltage: 40V
- Average forward current : 500mA

Application

- Low Forward Voltage
- Surface Mount Device

Mechanical data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	Symbol	Unit	Value
Device marking code			SF3
Repetitive peak reverse voltage	V_{RRM}	V	40
Forward current, per leg	I_F	mA	500
Non-Repetitive Surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	2
Power Dissipation	P_D	mW	300
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +125
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +125

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

PARAMETER	Symbol	UNIT	Conditions	Min	TYP	Max
Reverse voltage	V _R	V	IR=100uA	40	-	-
Forward Voltage	V _F	V	IF=10mA	-	-	0.3
			IF=200mA	-	-	0.5
Reverse Leakage Current	I _R	uA	VR=25V	-	-	70
Junction capacitance	C _j	pF	VR=0V,f=1MHz	-	-	100

■ Thermal Characteristics

PARAMETER	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	333

Note:

(1) Thermal resistance from junction to ambient mounted on PCB, single-sided copper, with standard footprint.

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■ Characteristics

Fig 1: PD-TA Curve

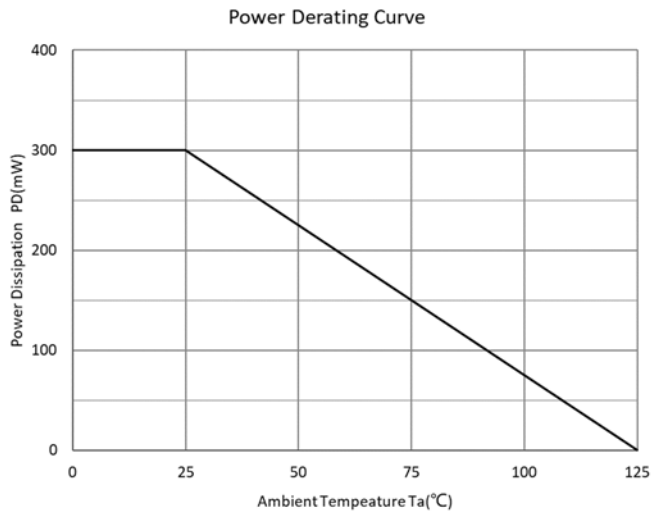


Fig 2: Capacitance Capability

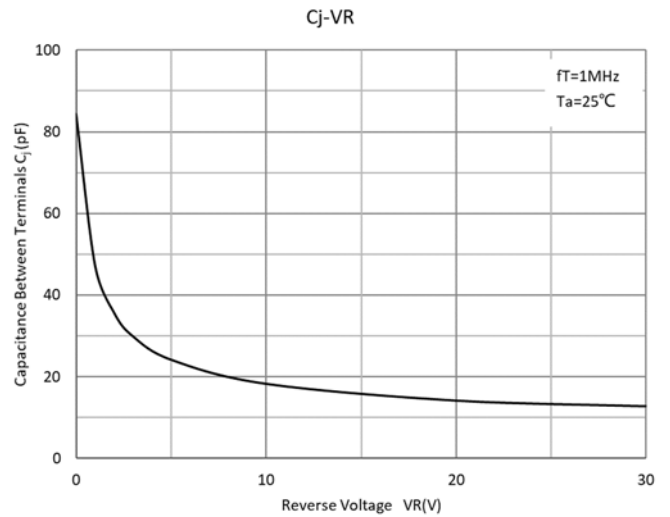


Fig 3: Typical Forward Characteristics

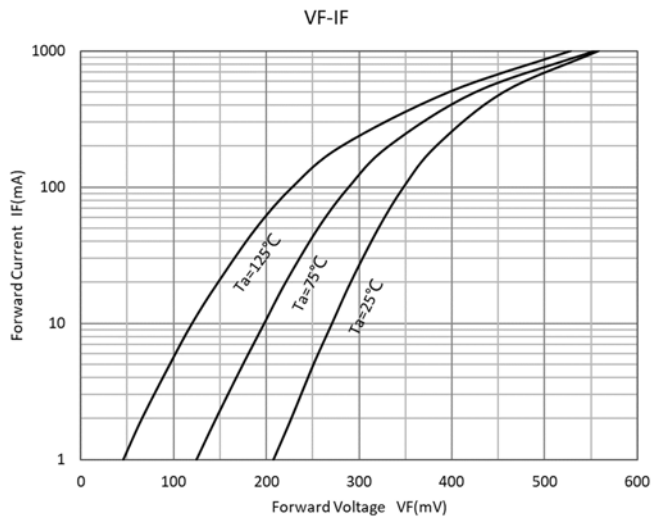
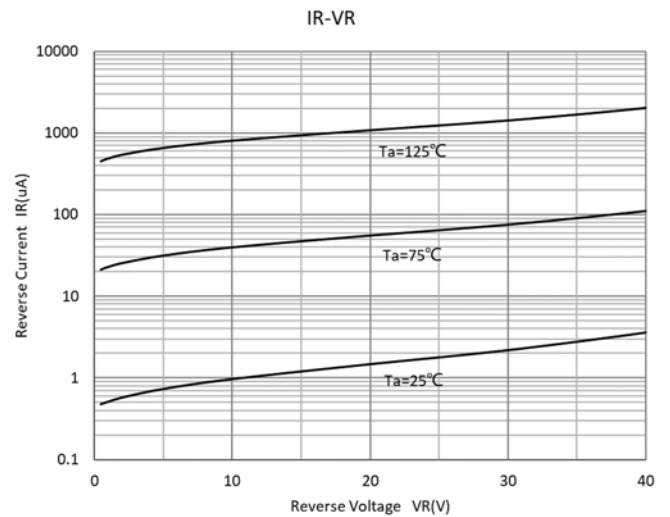


Fig 4: Typical Reverse Characteristics

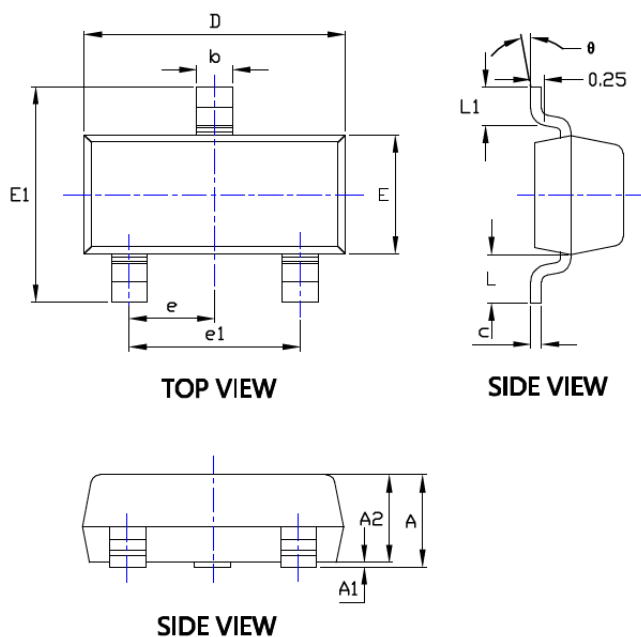


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■ Ordering Information

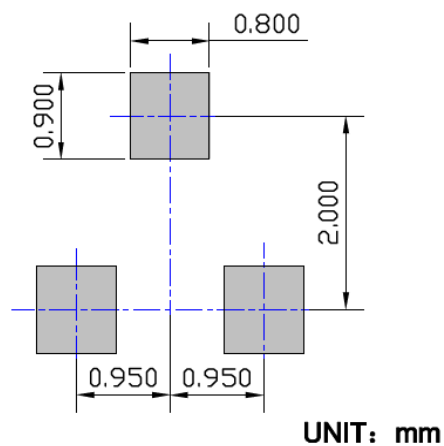
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SBT0540C	F2	Approximate 0.008	3000	30000	120000	7" reel

■ Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■ Suggested Pad Layout



SBT0540C

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