Silicon-Based Technology

Power Schottky Barrier Rectifier **SBT180A Series**

SBT180A series are Schottky Barrier Diodes fabricated by a series of proprietary Schottky barrier patents and technologies (SBT®) developed by Silicon-Based Technology Corporation, which exhibit high-performance characteristics for modern power switching, conversion and protection applications with high speed and low power consumptions. The package types as described in this data sheet are set forth in routine production; other packages are available upon special orders.

■ Features and Advantages:

- Low forward voltage drop(V_F)
- Low reverse leakage current (I_R)
- Very small conduction power loss
- Very small switching power loss
- Very high switching speed
- Very high reliability

■ Static Electrical Characteristics :

	V_F(V) Max.	I_F (A)	I_R(μA) Max./Typ.	V_R (V)	T_A (℃)
SBT180AL	**0.65**	**1.0**	**100/40**	**80**	**25**
SBT180AN	**0.68**				
SBT180AH	**0.70**				
SBT180AP	**0.72**				

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■ Maximum Ratings and Electrical Characteristics :

(@T_A=25℃ unless otherwise specified)

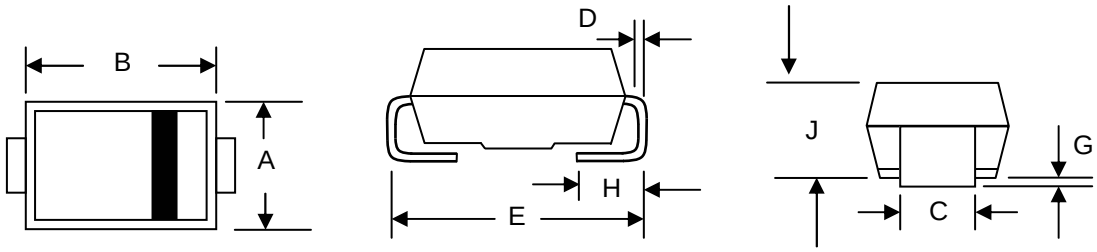
Characteristics		SBT180AL	SBT180AN	SBT180AH	SBT180AP	Unit
Peak Repetitive Reverse Voltage ,V_{RRM} Working Peak Reverse Voltage, V_{RWM} DC Blocking Voltage, V_R		80				V
RMS Reverse Voltage ,$V_{R(RMS)}$		56				V
Average Rectified Output Current, I_O	@T_T=130℃	1.0				A
Non-Repetitive Peak Forward Surge Current under 8.3msSingle Half Sine-Wave Superimposed on Rated Load (JEDEC Method), I_{FSM}		40				A
Forward Voltage, V_{FM}	@I_F=1.0A	0.65	0.68	0.70	0.72	V
Peak Reverse Current at Rated DC Blocking Voltage, I_{RM}	Max.	100				μA
	Typ.	40				
Typical Junction Capacitance, C_J (Note 1)		50				pF
Operating (Storage) Temperature Range, T_J (T_{STG})		-65 to +150				℃

Notes: 1. Measured at 1.0 MH_z and with an applied DC reverse voltage of 4.0V.

■ Package Data :

- Case**:** Molded Plastic Material (UL Flammability Classification 94V-0)
- Terminals**:** Solderable Plated Terminals (MIL-STD-202, Method 208)
- Lead Free Plating (Matte Tin Finish)
- Polarity**:** Cathode Band as shown in page3
- Approx. Weight**:** 0.0669 grams for SMA

SMA



DIMENSIONS(MM)								
	A	B	C	D	E	G	H	J
Min.	2.29	4.00	1.27	0.15	4.80	0.10	0.76	2.01
Max.	2.92	4.60	1.63	0.31	5.59	0.20	1.52	2.62

■ Ordering Information (Note 2)

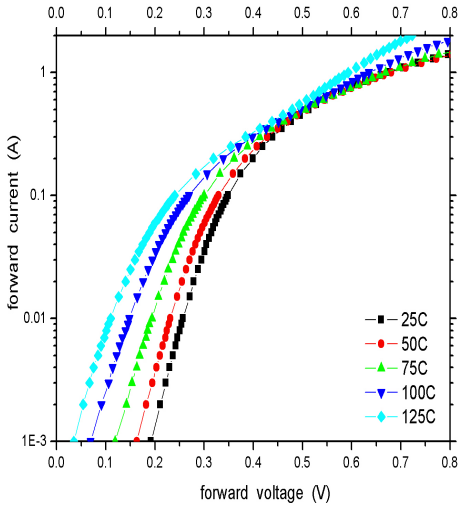
Part Number	Marking Code	Packaging Type	Shipping	
			7″ Tape & Real	13″ Tape & Real
SBT180AX	SBT1HAX	SMA	1.5K	5K

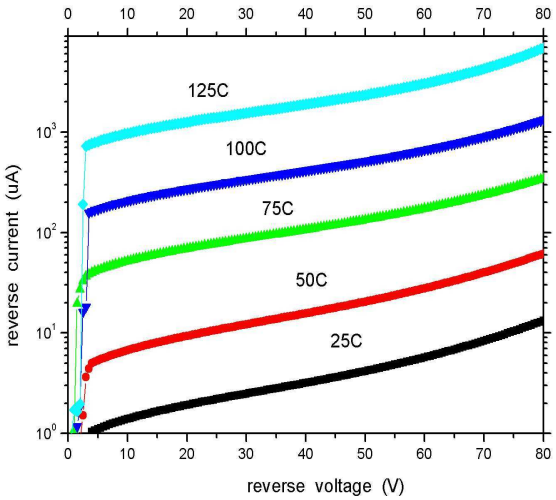
Notes: 2. For Packaging Details, please go to our Website at http://www.sbt.com.tw

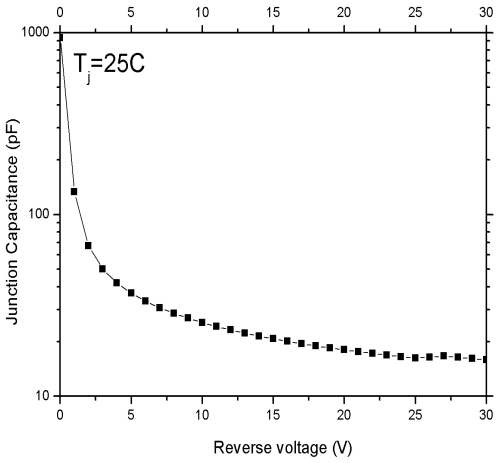
X = Device type, e.g.: X=L, X=N, X=H, X=P

3. Discrete form in a box is also available upon request.

4. Day code marking is YWW or YM, in which Y represents year (For example: 2005 is marked by 5); WW represents weekth in a year (For example: 5th week is marked by 05); M represents month in a year (For example: March is marked by C; November is marked by K).


forward current (A)
forward voltage (V)
25C
50C
75C
100C
125C


reverse current (uA)
reverse voltage (V)
125C
100C
75C
50C
25C


Junction Capacitance (pF)
Reverse voltage (V)
Tj=25C