Silicon-Based Technology Corp.

Small-Signal Schottky Barrier Diodes **SBT103AT Series**

SBT103AT 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 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

■ Electrical Characteristics : (@T_A=25℃ unless otherwise specified)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40	-	-	V	I_R=100μA
Forward Voltage (Note 2)	V_F	-	-	0.35 0.45 0.50	mV	I_F=20mA I_F=100mA I_F=200mA
Reverse Current (Note 2)	I_R	-	-	5.0	μA	V_R=30V
Total Capacitance	C_T	-	50	-	pF	V_R=0V, f=1.0MH$_Z$
Reverse Recovery Time	t_{rr}	-	10	-	ns	I_F=I_R=200mA, I_{rr}=0.1×I_R,R_L=100Ω

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■ Maximum Ratings : (@T_A=25℃ unless otherwise specified)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current (Note 1)	I_{FM}	350	mA
Non-Repetitive Peak Forward Surge Current @t≤1.0s	I_{FSM}	1.5	mA
Power Dissipation (Note 1)	P_d	225	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	444	℃/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125	℃

Notes: 1. Part mounted on FR-4 PC board with a recommended pad layout, which can be found on our website at www.sbt.com.tw

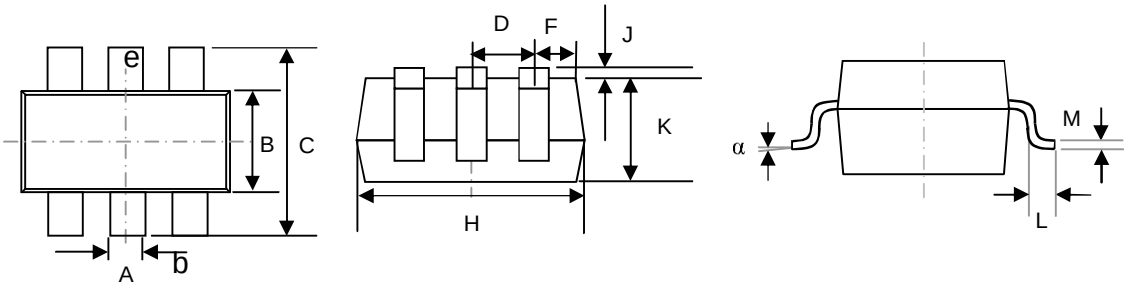
2. Short duration test pulse is used to minimize self-heating effect.

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■ 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**:** See devices configuration below
- Approx. Weight**:** 0.016 grams
- Package outline and dimensions (see below)

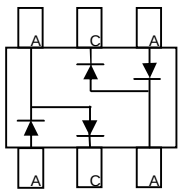
SOT-26



DIMENSIONS (MM)											
	A	B	C	D	F	H	J	K	L	M	α
Min.	0.35	1.50	2.70	-	-	2.90	0.013	1.00	0.35	0.10	0°
Max.	0.50	1.70	3.00	-	-	3.10	0.10	1.30	0.55	0.20	8°

■ Device Configurations :

TOP VIEW



SBT103AT

Ordering Information (Note 3)

Part Number	Marking Code	Packaging Type	Shipping
			7″ Tape & Real
SBT103AT	SBTJAD	SOT-26	3K

Notes: 3. Website at http://www.sbt.com.tw

4. Bulk package in a box form is also available upon request.

5. Day code marking is YM, in which Y represents year (For example: 2005 is marked by 5);
M represents month in a year (For example: March is marked by C; November is marked by K).