SBT54 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)	$V_{(BR)R}$	30	-	-	V	I_R=100μA
Forward Voltage (Note 2)	V_F	-	-	200 260 350 400 500	mV	I_F=0.1mA I_F=1mA I_F=10mA I_F=30mA I_F=100mA
Reverse Leakage Current (Note 2)	I_R	-	-	1.0	μA	V_R=25V
Total Capacitance	C_T	-	-	10	pF	V_R=3.0V, f=1.0MH$_Z$
Reverse Recovery Time	t_{rr}	-	-	5.0	ns	I_F=10mA through I_R =10mA to I_R=1.0mA, R_L=100Ω

■ 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	30	V
Forward Continuous Voltage (Note 2)	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward Surge Current @t<1.0s	I_{FSM}	600	mA
Power Dissipation (Note 2)	P_d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500	℃/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125	℃

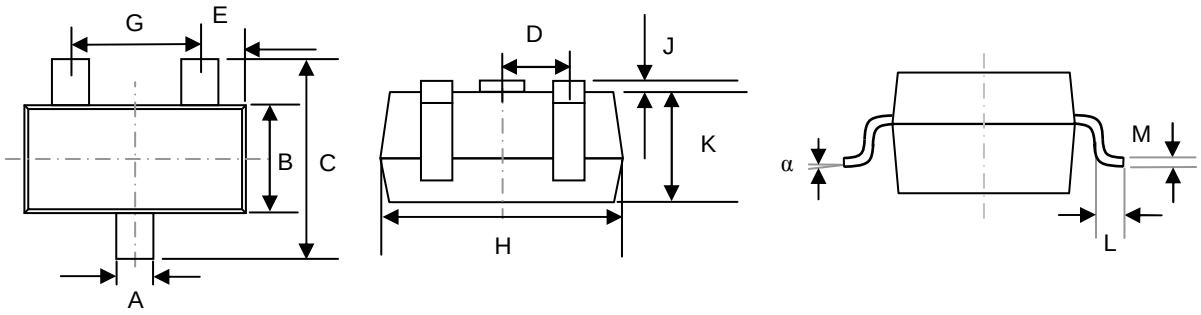
Notes: 1. Short duration test pulse used to minimize self-heating effect.

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

■ 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 device configurations below
- Approx. Weight**:** 0.008 grams
- Package outline and dimensions (see below)

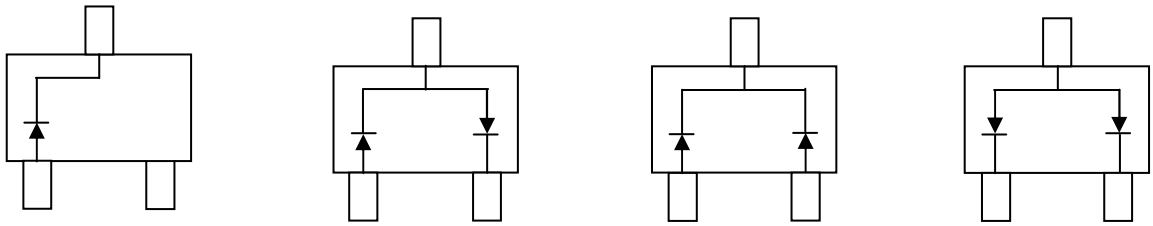
SOT-23



DIMENSIONS (MM)												
	A	B	C	D	E	G	H	J	K	L	M	α
Min.	0.37	1.20	2.30	0.89	0.45	1.78	2.80	0.013	0.903	0.45	0.085	0°
Max.	0.51	1.40	2.50	1.03	0.60	2.05	3.00	0.10	1.10	0.61	0.180	8°

■ Device Configurations :

TOP VIEW



SBT54 SBT54A SBT54C SBT54S

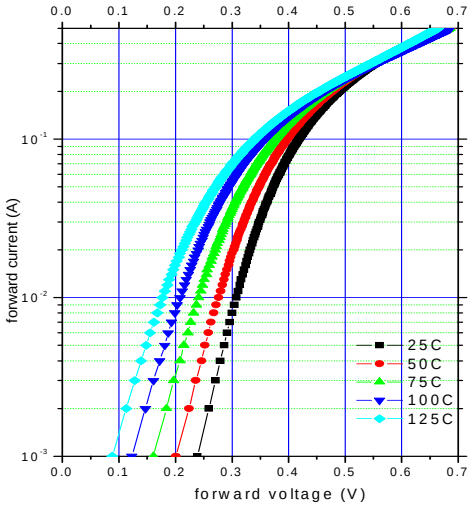
■ Ordering Information (Note 3)

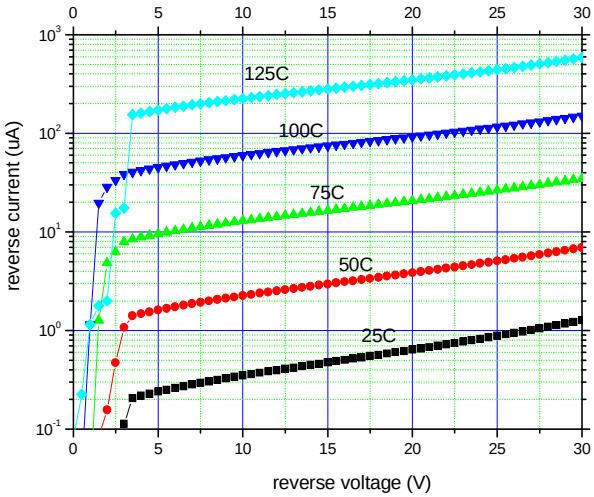
Part Number	Marking Code	Packaging Type	Shipping
			7″ Tape & Real
SBT54	SBT54	SOT-23	3K
SBT54A	SBT54A	SOT-23	3K
SBT54C	SBT54C	SOT-23	3K
SBT54S	SBT54S	SOT-23	3K

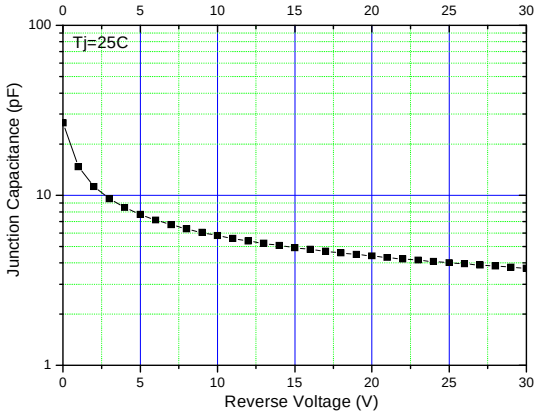
Notes: 3. Website at http://www.sbt.com.tw

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).


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


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


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