

Silicon-Based Technology Corp.

BZX84C2V4T – BZX84C39T

Small-Signal Zener Diodes

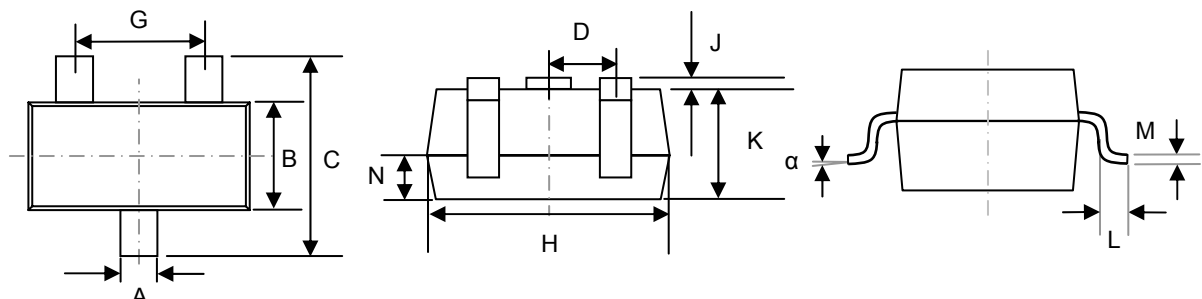
■ Features and Advantages:

- Surface mount package for automatic assembly process
- High precision Zener voltage (V_Z) (Note3.)
- Small Zener diode dynamic impedance(Z_{ZT})
- Low standby reverse current(V_R) (Note4.)
- Very high reliability

■ Package Data :

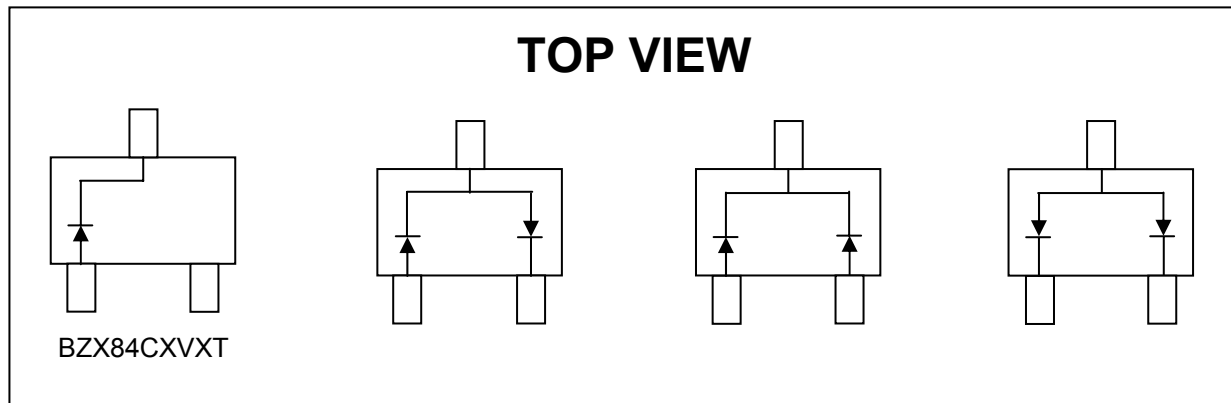
- Case: SOT-523
- Molded Plastic Material (UL Flammability Classification 94V-0)
- Molded Green Plastic Material (RoHS Compliant)
- Terminals: Solderable Plated Terminals (MIL-STD-202, Method 208)
- Lead Free Plating (Matte Tin Finish)
- Moisture Sensitivity : Level 1 per J-STD-020C
- Polarity: See Cathode band in device configurations below
- Package outline and dimensions (see below)
- Marking & date codes(see below)
- Approx. Weight: 0.004 grams.

SOT-523



DIMENSIONS (MM)

	A	B	C	D	G	H	J	K	L	M	N	α
Min.	0.15	0.75	1.45	-	0.90	1.50	0.00	0.60	0.10	0.10	0.45	0°
Max.	0.30	0.85	1.75	-	1.10	1.70	0.10	0.80	0.30	0.20	0.65	8°

**■ Device Configurations :****■ Maximum Ratings : (@T_A=25°C unless otherwise specified)**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P _d	150	mW
Thermal Resistance Junction to Ambient (Note 1)	R _{θJA}	833	°C/W
Operating Temperature Range	T _j	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

Notes: 1. Part mounted on FR4 PC Board with recommended pad layout, which can be found on our website at <http://www.sbt.com.tw>.

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





BZX84C2V4T- BZX84C39T

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

Part Type	Marking Codes	Zener Voltage			Max. Zener Impedance				Max.Reverse Current		Typical Temperature Coefficient @ I_{ZTC} mV/°C	
		V _Z @I _{ZT}			Z _{ZT} @I _{ZT}		Z _{ZK} @I _{ZK}		I _R @V _R			
		NomV	MinV	MaxV	Ω	mA	Ω	mA	μA	V	Min	Max
BZX84C2V4T	K1	2.4	2.20	2.60	100	5.0	600	1.0	50	1.0	-3.5	0
BZX84C2V7T	K3	2.7	2.50	2.90	100	5.0	600	1.0	20	1.0	-3.5	0
BZX84C3V0T	K5	3.0	2.80	3.20	95	5.0	600	1.0	20	1.0	-3.5	0
BZX84C3V3T	K6	3.3	3.10	3.50	95	5.0	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6T	K7	3.6	3.40	3.80	90	5.0	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9T	K8	3.9	3.70	4.10	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3T	K9	4.3	4.00	4.60	90	5.0	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7T	L0	4.7	4.40	5.00	80	5.0	600	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1T	L1	5.1	4.80	5.40	60	5.0	500	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6T	L2	5.6	5.20	6.00	40	5.0	480	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2T	L4	6.2	5.80	6.60	10	5.0	400	1.0	3.0	4.0	0.4	3.7
BZX84C6V8T	L5	6.8	6.40	7.20	15	5.0	150	1.0	2.0	4.0	1.2	4.5
BZX84C7V5T	L6	7.5	7.00	7.90	15	5.0	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2T	L7	8.2	7.70	8.70	15	5.0	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1T	L9	9.1	8.50	9.60	15	5.0	80	1.0	0.5	6.0	3.8	7.0
BZX84C10T	M0	10	9.40	10.60	20	5.0	100	1.0	0.2	7.0	4.5	8.0
BZX84C11T	M1	11	10.40	11.60	20	5.0	150	1.0	0.1	8.0	5.4	9.0
BZX84C12T	M2	12	11.40	12.70	25	5.0	150	1.0	0.1	8.0	6.0	10.0
BZX84C13T	M3	13	12.40	14.10	30	5.0	150	1.0	0.1	7.0	7.0	11.0
BZX84C15T	M5	15	13.80	15.60	30	5.0	170	1.0	0.1	10.5	9.2	13.0
BZX84C16T	M6	16	15.30	17.10	40	5.0	200	1.0	0.1	11.2	10.4	14.0
BZX84C18T	M8	18	16.80	19.10	45	5.0	200	1.0	0.1	12.6	12.4	16.0
BZX84C20T	N0	20	18.80	21.20	55	5.0	225	1.0	0.1	14.0	14.4	18.0
BZX84C22T	N1	22	20.80	23.30	55	5.0	225	1.0	0.1	15.4	16.4	20.0
BZX84C24T	N2	24	22.80	25.60	70	5.0	250	1.0	0.1	16.8	18.4	22.0
BZX84C27T	N4	27	25.10	28.90	80	2.0	250	0.5	0.1	18.9	21.4	25.3
BZX84C30T	N6	30	28.00	32.00	80	2.0	300	0.5	0.1	21.0	24.4	29.4
BZX84C33T	N7	33	31.00	35.00	80	2.0	300	0.5	0.1	23.1	27.4	33.4
BZX84C36T	N8	36	34.00	38.00	90	2.0	325	0.5	0.1	25.2	30.4	37.4
BZX84C39T	N9	39	37.00	41.00	130	2.0	350	0.5	0.1	27.3	33.4	41.2

■ Ordering Information (Note 5)

Part Number	Marking Code	Packaging Type	Shipping
			7" Tape & Real
BZX84CXVXT	SBTYY	SOT-523	3K

Notes: 3. Zener Voltage(V_Z) tolerance indicated by A($\pm 2\%$), B($\pm 3\%$) and C($\pm 5\%$) after 23 in the part number can be requested by customer.

4. Low standby current ($I_R @ V_R$) with 10X, 50X, 100X, and 200X smaller than that indicates in the product Table is available upon request.

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

6. 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).

7. Website at <http://www.sbt.com.tw>