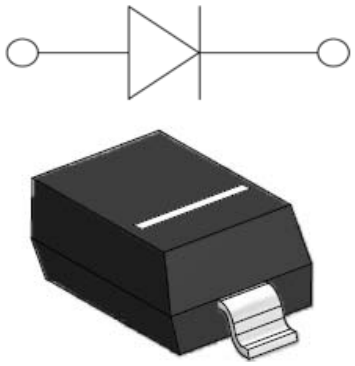
Small Signal Zener Diodes



SOD123

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Zener Voltage 3.6V~47V
- V_Z-tolerance ±2% approximately
- Part no. with suffix “Q” means AEC-Q101 qualified

Applications

- General regulation functions

Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ Maximum Ratings (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	P_D	mW	500
Storage Temperature Range	T_{stg}	°C	-55~+150
Junction Temperature	T_J	°C	-55~+150
Maximum Regulator Current	I_{ZM}	mA	P_D/ V_z
Maximum Forward Voltage（I_F=10mAdc）	V_F	V	0.9
Thermal Resistance Junction to Ambient Air*	$R_{\theta JA}$	°C /W	340

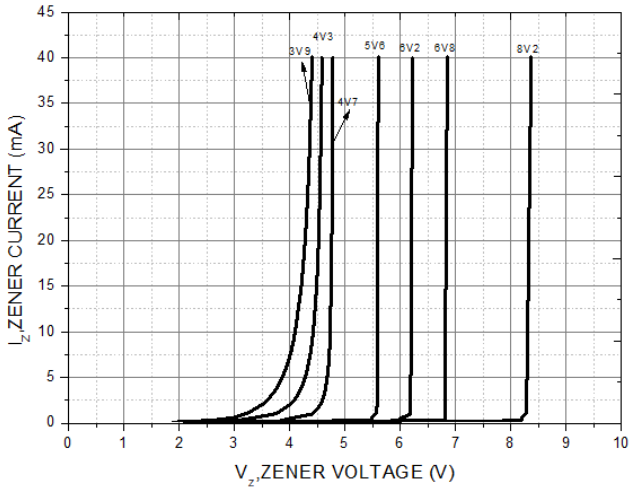
■ Ordering Information (Example)

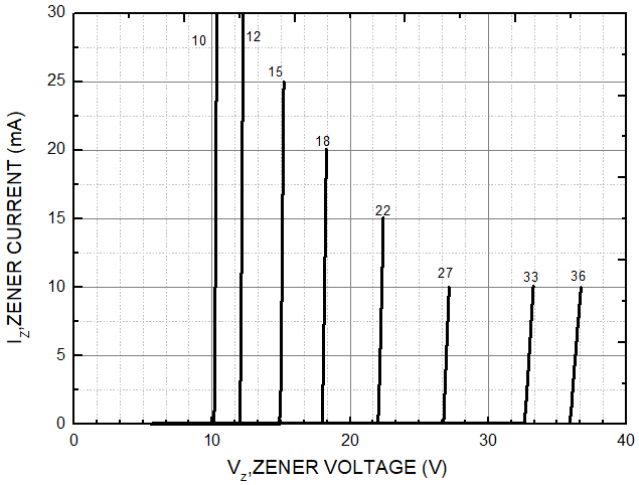
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BZT52B3V6Q THRU BZT52B47Q	F2	Approximate 0.01	3000	30000	120000	7” reel

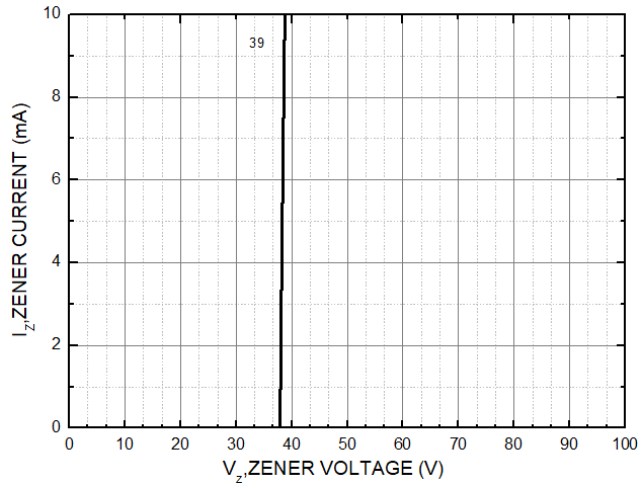
■ **Electrical Characteristics** (T_a=25℃ Unless otherwise specified)

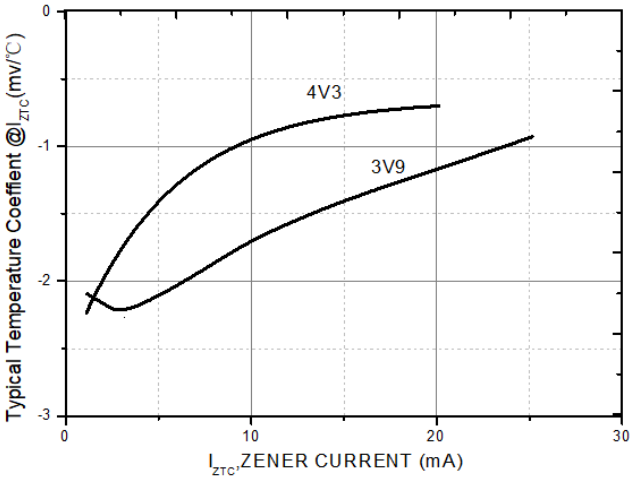
Type Number	Device Marking	V_z at I_{zt} (V)			I_{zt}	Z_{zt}(Ω)		Z_{zk}(Ω)		I_R(μA)@V_R		Typical Temperature Coefficient@ I_{ZTC} mV/℃		Test Current I_{ZTC}
		min.	typ.	max.	mA	I_{zt}(mA)	max.	I_{zk}(mA)	max.	uA	V_R(V)	Min	Max	mA
BZT52B3V6Q	2W4	3.53	3.6	3.67	5	5	90	1.0	600	5	1.0	-3.5	0	5
BZT52B3V9Q	2W5	3.82	3.9	3.98	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52B4V3Q	2W6	4.21	4.3	4.39	5	5	90	1.0	600	3	1.0	-3.5	0	5
BZT52B4V7Q	2W7	4.61	4.7	4.79	5	5	80	1.0	500	3	2.0	-3.5	0.2	5
BZT52B5V1Q	2W8	5.0	5.1	5.2	5	5	60	1.0	480	2	2.0	-2.7	1.2	5
BZT52B5V6Q	2W9	5.49	5.6	5.71	5	5	40	1.0	400	1	2.0	-2	2.5	5
BZT52B6V2Q	2WA	6.08	6.2	6.32	5	5	10	1.0	150	3	4.0	0.4	3.7	5
BZT52B6V8Q	2WB	6.66	6.8	6.94	5	5	15	1.0	80	2	4.0	1.2	4.5	5
BZT52B7V5Q	2WC	7.35	7.5	7.65	5	5	15	1.0	80	1	5.0	2.5	5.3	5
BZT52B8V2Q	2WD	8.04	8.2	8.36	5	5	15	1.0	80	0.7	5.0	3.2	6.2	5
BZT52B9V1Q	2WE	8.92	9.1	9.28	5	5	15	1.0	100	0.5	6.0	3.8	7.0	5
BZT52B10Q	2WF	9.8	10	10.2	5	5	20	1.0	150	0.2	7.0	4.5	8.0	5
BZT52B11Q	2WG	10.78	11	11.22	5	5	20	1.0	150	0.1	8.0	5.4	9.0	5
BZT52B12Q	2WH	11.76	12	12.24	5	5	25	1.0	150	0.1	8.0	6.0	10.0	5
BZT52B13Q	2WI	12.74	13	13.3	5	5	30	1.0	170	0.1	8.0	7.0	11.0	5
BZT52B15Q	2WJ	14.7	15	15.3	5	5	30	1.0	200	0.1	10.5	9.2	13.0	5
BZT52B16Q	2WK	15.68	16	16.3	5	5	40	1.0	200	0.1	11.2	10.4	14.0	5
BZT52B18Q	2WL	17.6	18	18.4	5	5	45	1.0	225	0.1	12.6	12.4	16.0	5
BZT52B20Q	2WM	19.6	20	20.4	5	5	55	1.0	225	0.1	14.0	14.4	18.0	5
BZT52B22Q	2WN	21.56	22	22.44	5	5	55	1.0	250	0.1	15.4	16.4	20.0	5
BZT52B24Q	2WO	23.52	24	24.5	5	5	70	1.0	250	0.1	16.8	18.4	22.0	5
BZT52B27Q	2WP	26.46	27	27.54	2	2	80	0.5	300	0.1	18.9	21.4	25.3	2
BZT52B30Q	2WQ	29.4	30	30.6	2	2	80	0.5	300	0.1	21.0	24.4	29.4	2
BZT52B33Q	2WR	32.34	33	33.7	2	2	80	0.5	325	0.1	23.1	27.4	33.4	2
BZT52B36Q	2WS	35.28	36	36.72	2	2	90	0.5	350	0.1	25.2	30.4	37.4	2
BZT52B39Q	2WT	38.22	39	39.8	2	2	130	0.5	350	0.1	27.3	33.4	41.2	2
BZT52B43Q	2WU	42.14	43	43.86	2	2	100	0.5	700	0.1	32	37.6	50.6	2
BZT52B47Q	2WV	46.06	47	47.94	2	2	100	0.5	750	0.1	35	42.0	55.8	2

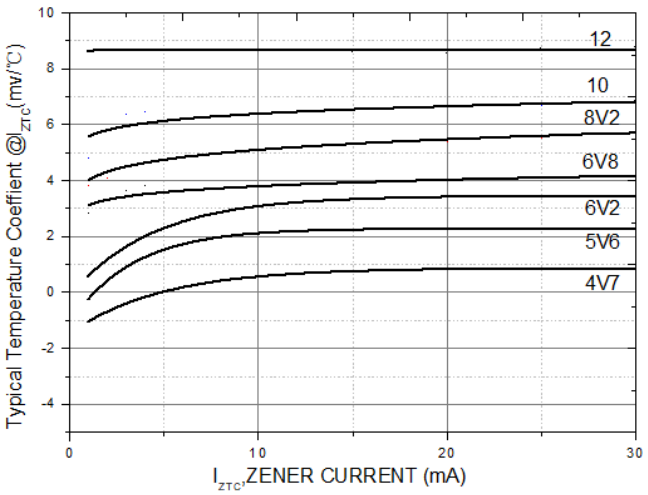
■ **Characteristics** (Typical)

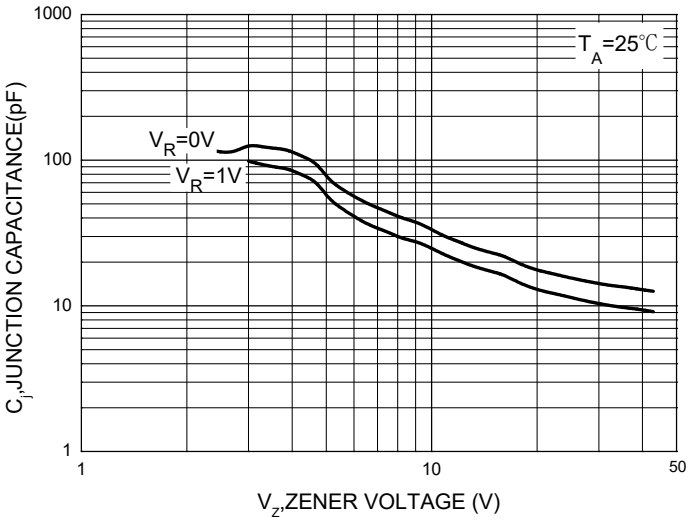




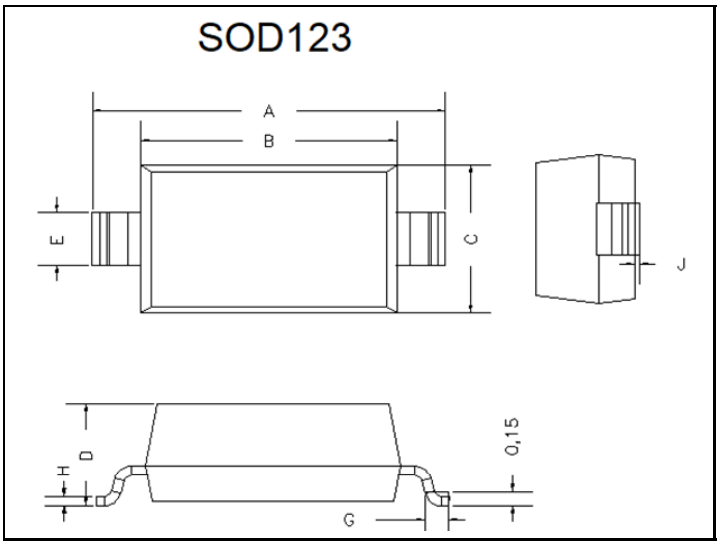






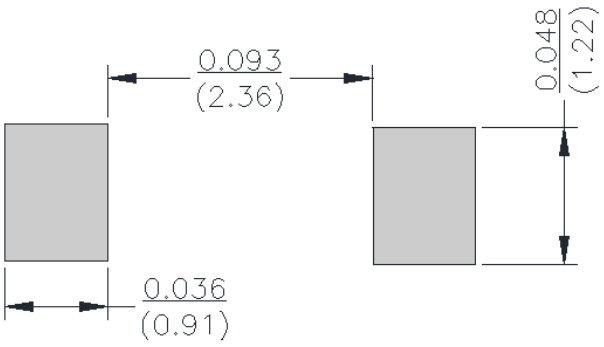


■ Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	-	0.053	-	1.35	
E	0.012	0.031	0.30	0.78	
G	0.006	-	0.15	-	
H	-	0.010	-	0.25	
J	-	0.006	-	0.15	

■ Soldering Footprint



Unit: inch / mm

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