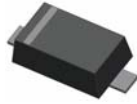


Small Signal Diode



Features

- ✧ Wide zener voltage range selection : 2.4V to 75V
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧ Pb free version, RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

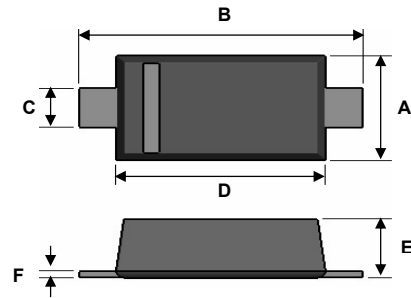
- ✧ Case : SOD-523F small outline plastic package
- ✧ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Polarity : Indicated by cathode band
- ✧ Weight : 1.68±0.5 mg

Ordering Information

Part No.	Package code	Package	Packing
BZT52C2V4K~75K	RK	SOD-523F	3K / 7" Reel
BZT52C2V4K~75K	RKG	SOD-523F	3K / 7" Reel

BZT52C2V4K~BZT52C75K 200mW, Surface Mount Zener Diode

SOD-523F

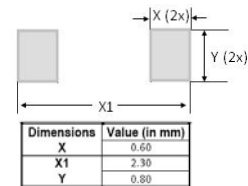


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.70	0.90	0.028	0.035
B	1.50	1.70	0.059	0.067
C	0.25	0.40	0.010	0.016
D	1.10	1.30	0.043	0.051
E	0.60	0.70	0.024	0.028
F	0.10	0.14	0.004	0.006

Pin Configuration



Suggested PAD Layout



Maximum Ratings and Electrical Characteristics

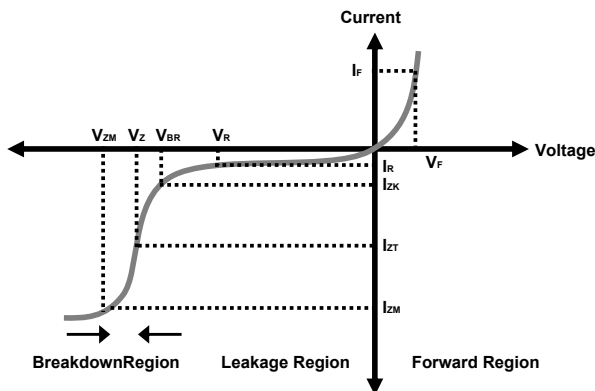
Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	200	mW
Forward Voltage $I_F=10\text{mA}$	V_F	1	V
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	625	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

Notes: 1. Valid provided that electrodes are kept at ambient temperature

Zener I vs. V Characteristics



- V_{BR} : Voltage at I_{ZK}
- I_{ZK} : Test current for voltage V_{BR}
- Z_{ZK} : Dynamic impedance at I_{ZK}
- I_{ZT} : Test current for voltage V_Z
- V_Z : Voltage at current I_{ZT}
- Z_{ZT} : Dynamic impedance at I_{ZT}
- I_{ZM} : Maximum steady state current
- V_{ZM} : Voltage at I_{ZM}

Small Signal Diode
Electrical Characteristics

Ta = 25°C unless otherwise noted

V_F Forward Voltage = 1V Maximum @ I_F = 10 mA for all part numbers

Part Number	Device Marking	V _Z @ I _{ZT} (VOLT)			I _{ZT} (mA)	Z _{VT} @ I _{ZT} (Ω) Max	I _{ZK} (mA)	Z _{VK} @ I _{ZK} (Ω) Max	I _R @ V _R (μA) Max	V _R (V)
		Nom	Min	Max						
BZT52C2V4K	50	2.2	2.4	2.6	5	100	1	1000	50	1
BZT52C2V7K	51	2.5	2.7	2.9	5	100	1	1000	20	1
BZT52C3V0K	52	2.8	3	3.2	5	100	1	1000	10	1
BZT52C3V3K	53	3.1	3.3	3.5	5	95	1	1000	5	1
BZT52C3V6K	54	3.4	3.6	3.8	5	90	1	1000	5	1
BZT52C3V9K	55	3.7	3.9	4.1	5	90	1	1000	3	1
BZT52C4V3K	56	4	4.3	4.6	5	90	1	1000	3	1
BZT52C4V7K	57	4.4	4.7	5	5	80	1	800	3	2
BZT52C5V1K	58	4.8	5.1	5.4	5	60	1	500	2	2
BZT52C5V6K	59	5.2	5.6	6	5	40	1	200	1	2
BZT52C6V2K	5A	5.8	6.2	6.6	5	10	1	100	3	4
BZT52C6V8K	5B	6.4	6.8	7.2	5	15	1	160	2	4
BZT52C7V5K	5C	7	7.5	7.9	5	15	1	160	1	5
BZT52C8V2K	5D	7.7	8.2	8.7	5	15	1	160	0.7	5
BZT52C9V1K	5E	8.5	9.1	9.6	5	15	1	160	0.2	7
BZT52C10K	5F	9.4	10	10.6	5	20	1	160	0.1	8
BZT52C11K	5G	10.4	11	11.6	5	20	1	160	0.1	8
BZT52C12K	5H	11.4	12	12.7	5	25	1	80	0.1	8
BZT52C13K	5J	12.4	13	14.1	5	30	1	80	0.1	8
BZT52C15K	5K	14.3	15	15.8	5	30	1	80	0.05	10.5
BZT52C16K	5L	15.3	16	17.1	5	40	1	80	0.05	11.2
BZT52C18K	5M	16.8	18	19.1	5	45	1	80	0.05	12.6
BZT52C20K	5N	18.8	20	21.2	5	55	1	100	0.05	14
BZT52C22K	5P	20.8	22	23.3	5	55	1	100	0.05	15.4
BZT52C24K	5R	22.8	24	25.6	5	70	1	120	0.05	16.8
BZT52C27K	5S	25.1	27	28.9	2	80	0.5	300	0.05	18.9
BZT52C30K	5T	28	30	32	2	80	0.5	300	0.05	21
BZT52C33K	5U	31	33	35	2	80	0.5	300	0.05	23.2
BZT52C36K	5V	34	36	38	2	90	0.5	500	0.05	25.2
BZT52C39K	5X	37	39	41	2	130	0.5	500	0.05	27.3
BZT52C43K	5Y	40	43	46	2	150	0.5	500	0.05	30.1
BZT52C47K	5Z	44	47	50	2	170	0.5	500	0.05	32.9
BZT52C51K	5-	48	51	54	2	180	0.5	500	0.05	35.7
BZT52C56K	5=	52	56	60	2	200	0.5	500	0.05	39.2
BZT52C62K	5≡	58	62	66	2	215	0.5	500	0.05	43.4
BZT52C68K	5>	64	68	72	2	240	0.5	500	0.05	47.6
BZT52C75K	5<	70	75	79	2	255	0.5	500	0.05	52.5

Notes:

1. The Zener Voltage (V_Z) is tested under pulse condition of 10ms
2. The device numbers listed have a standard tolerance on the nominal zener voltage of ±2%.
3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances,
4. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the DC zener current

Small Signal Diode

Rating and Sharacteristic Curves

