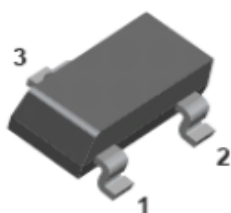
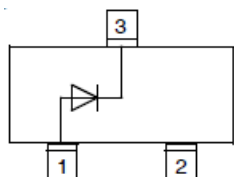


Zener Diodes



SOT-23

Features

- Moisture sensitivity level 1
- Zener voltage 39V~75V

Application

- Linear voltage regulator
- Dc regulator
- Small-signal surge protection

Mechanical data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Characteristic	Symbol	Value	Units
Maximum forward voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Power dissipation	P_D	350	mW
Peak forward surge current*	I_{FSM}	2.0	A
Operation temperature	T_J	-55~+150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55~+150	$^{\circ}\text{C}$



BZX84B39 THRU BZX84B75

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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Type number	Device marking	V _Z @ I _{ZT} (V)			Z _{ZT} (Ω)		Z _{ZK} (Ω)		I _R (μA) @V _R		Typical temperature coefficient @ I _{ZTC} mV/°C		Test current I _{ZTC}
		Min.	Typ.	Max.	I _{ZT} (mA)	Max.	I _{ZK} (mA)	Max.	Max	V _R (V)	Min	Max	mA
BZX84B39	Y14	38.22	39	39.78	5	90	1.0	350	0.1	29.0	33.4	41.2	2
BZX84B43	Y15	42.14	43	43.86	5	100	1	375	0.1	32.0	37.6	46.6	2
BZX84B47	Y16	46.06	47	47.94	5	110	1	375	0.1	35.0	42.0	51.8	2
BZX84B51	Y17	50.0	51	52.0	2	180	0.5	400	0.05	35.7	46.6	57.2	2
BZX84B56	Y18	54.9	56	57.1	2	200	0.5	425	0.05	39.2	52.2	63.8	2
BZX84B62	Y19	60.8	62	63.2	2	215	0.5	450	0.05	43.4	58.8	71.6	2
BZX84B68	Y20	66.64	68	69.36	2	240	0.5	475	0.05	47.6	65.6	79.8	2
BZX84B75	Y21	73.5	75	76.5	2	255	0.5	500	0.05	52.5	73.4	88.6	2

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	357
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	286

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint



■ Characteristics

Fig 1: Zener Breakdown Characteristics

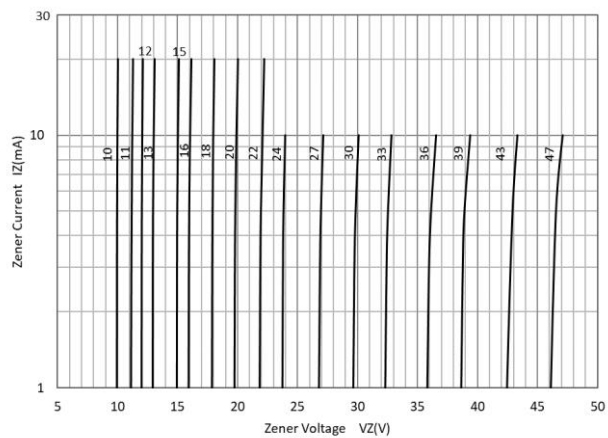
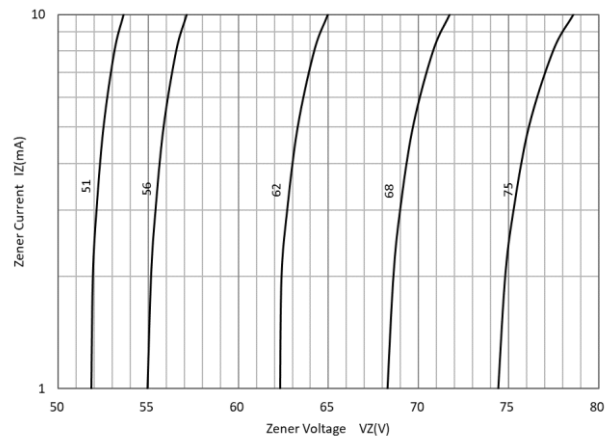


Fig 2: Zener Breakdown Characteristics





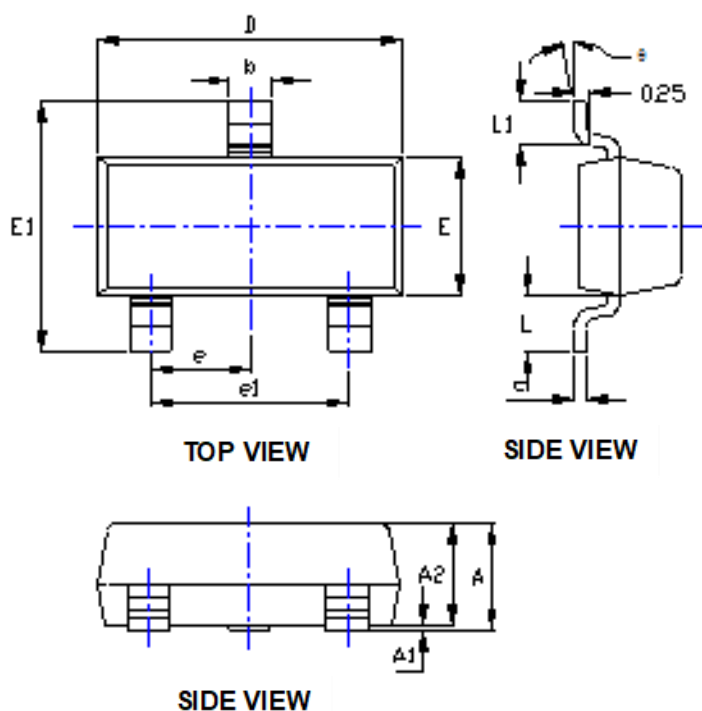
BZX84B39 THRU BZX84B75

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■ Ordering Information

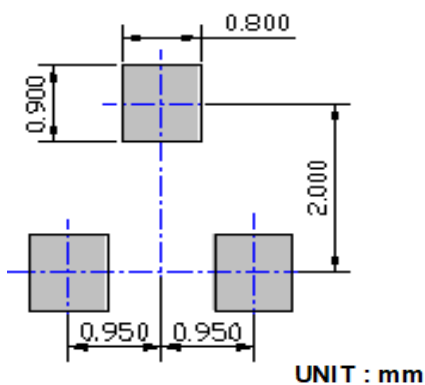
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BZX84B39 THRU BZX84B75	F2	Approximate 0.008	3000	30000	120000	7" reel
BZX84B39 THRU BZX84B75	F4	Approximate 0.008	10000	/	210000	13" reel

■ Outline Dimensions



DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■ Suggested Pad Layout





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