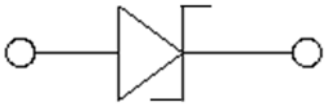
BZT52A12BS

Zener Diodes



Features

- Moisture sensitivity level 1
- Zener voltage 12V

Application

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

Mechanical data

- **Package**: SOD-323
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

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

Parameter	Symbol	Unit	Value
Forward voltage @ I_F=10mA	V_F	V	0.9
Power dissipation	P_D	mW	300
Maximum regulator current	I_{ZM}	mA	P_D/ V_Z
Junction temperature	T_J	℃	-55 to +150
Storage temperature	T_{STG}	℃	-55 to +150

■ Electrical Characteristics (Ta=25℃ 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/℃		Test Current I_{ZTC}
		min.	typ.	max.	I_{ZT}(mA)	max.	I_{ZK}(mA)	max.	max	V_R(V)	Min	Max	mA
BZT52A12BS	33	11.88	12	12.12	5	25	1.0	150	0.1	8	6	10	5

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	312
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	249

Note:

（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

■Characteristics

Fig 1：P_D-Ta Curve

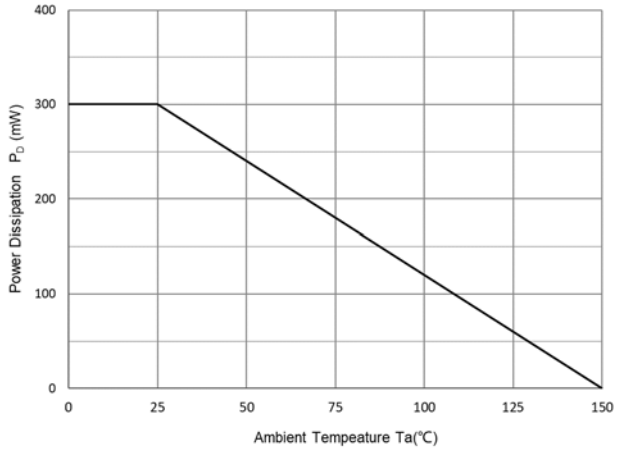


Fig 2：Zener Breakdown Characteristics

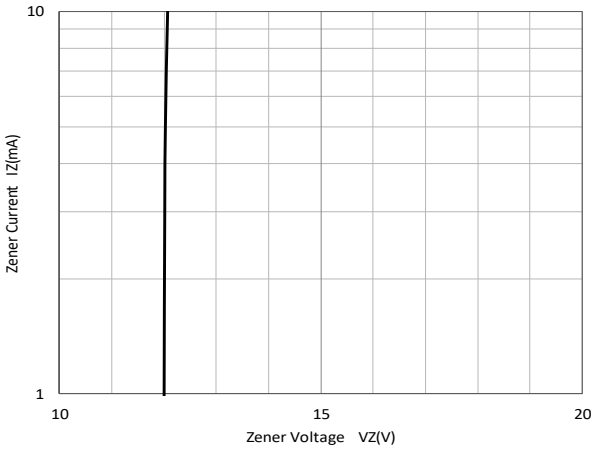
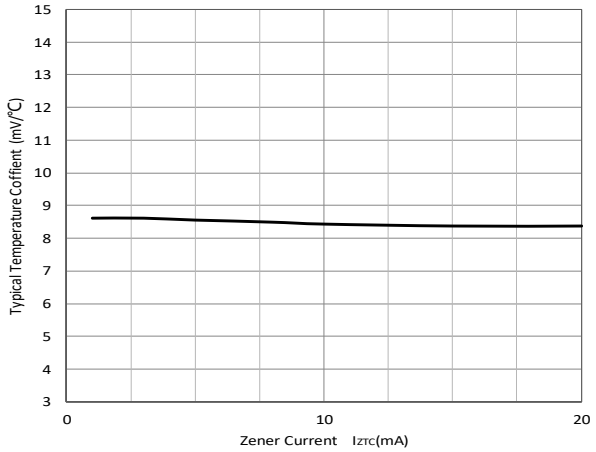


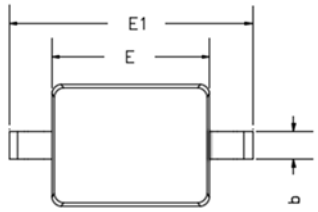
Fig 3：Typical Temperature Coeffient



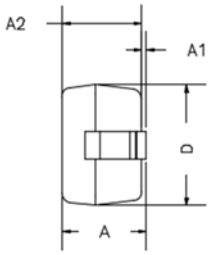
■Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BZT52A12BS	F2	Approximate 0.0048	3000	30000	120000	7” reel
BZT52A12BS	F3	Approximate 0.0048	10000	/	210000	13” reel

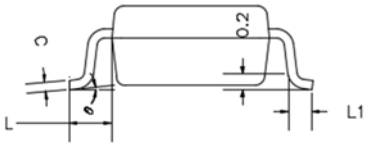
■ Outline Dimensions



TOP VIEW



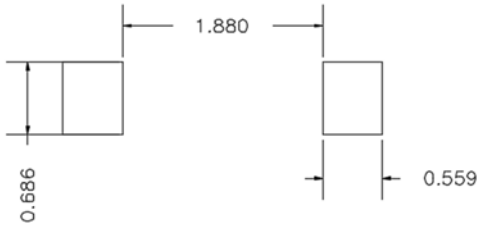
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

■ Suggested Pad Layout



UNIT: mm

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