

GSBZX84A2V4 thru GSBZX84A75

Surface Mount Zener Diodes

Vz Range: 2.4V to 75V Power Dissipation: 300mW

Features

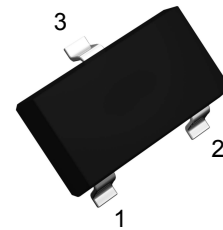
- Low profile package
- Ideal for automated placement
- Low zener impedance
- Power dissipation of 300mW
- High stability and high reliability

Mechanical Data

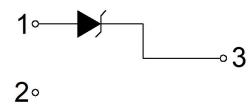
- Package: SOT-23
- Lead finish: Matte tin
- UL flammability classification rating 94V-0

Applications

- Surge protection
- Voltage stabilization
- Polarity protection



SOT-23



Schematic Diagram

Maximum Rating (T=25°C, RH=45%-75%, unless otherwise specified)

Parameters	Symbol	Value	Unit
Forward Voltage @ I _F =10mA	V _F	0.9	V
Maximum Forward Current	I _F	200	mA
Power Dissipation	P _D	300	mW
Thermal Resistance Junction to Ambient	R _{θJA}	417	°C/W
Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

GSBZX84A2V4 thru GSBZX84A75

Surface Mount Zener Diodes

Vz Range: 2.4V to 75V Power Dissipation: 300mW

Electrical Characteristics (T=25°C, RH=45%-75%, unless otherwise specified)

Part Number	Marking Code	Zener Voltage Range @ I _{ZT}				Maximum Zener Impedance			Maximum Reverse Leakage Current		Typical Temperature Coefficient @ I _{ZTC} =5mA mV/°C	
		V _Z			at I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK}	at I _{ZK}	I _R	at V _R	-	-
		Nom. (V)	Min. (V)	Max. (V)	(mA)	(Ω)	(Ω)	(mA)	(uA)	(V)	Min	Max
GSBZX84A2V4	2Z11	2.4	2.38	2.42	5	100	600	1.0	50	1.0	-3.5	0
GSBZX84A2V7	2Z12	2.7	2.67	2.73	5	100	600	1.0	20	1.0	-3.5	0
GSBZX84A3V0	2Z13	3.0	2.97	3.03	5	95	600	1.0	10	1.0	-3.5	0
GSBZX84A3V3	2Z14	3.3	3.27	3.33	5	95	600	1.0	5	1.0	-3.5	0
GSBZX84A3V6	2Z15	3.6	3.56	3.64	5	90	600	1.0	5	1.0	-3.5	0
GSBZX84A3V9	2Z16	3.9	3.86	3.94	5	90	600	1.0	3	1.0	-3.5	0
GSBZX84A4V3	2Z17	4.3	4.26	4.34	5	90	600	1.0	3	1.0	-3.5	0
GSBZX84A4V7	2Z1	4.7	4.65	4.75	5	80	500	1.0	3	2.0	-3.5	0.2
GSBZX84A5V1	2Z2	5.1	5.05	5.15	5	60	480	1.0	2	2.0	-2.7	1.2
GSBZX84A5V6	2Z3	5.6	5.54	5.66	5	40	400	1.0	1	2.0	-2.0	2.5
GSBZX84A6V2	2Z4	6.2	6.14	6.26	5	10	150	1.0	3	4.0	0.4	3.7
GSBZX84A6V8	2Z5	6.8	6.73	6.87	5	15	80	1.0	2	4.0	1.2	4.5
GSBZX84A7V5	2Z6	7.5	7.43	7.58	5	15	80	1.0	1	5.0	2.5	5.3
GSBZX84A8V2	2Z7	8.2	8.12	8.28	5	15	80	1.0	0.7	5.0	3.2	6.2
GSBZX84A9V1	2Z8	9.1	9.01	9.19	5	15	100	1.0	0.5	6.0	3.8	7.0
GSBZX84A10	2Z9	10	9.90	10.10	5	20	150	1.0	0.2	7.0	4.5	8.0
GSBZX84A11	2Y1	11	10.89	11.11	5	20	150	1.0	0.1	8.0	5.4	9.0
GSBZX84A12	2Y2	12	11.88	12.12	5	25	150	1.0	0.1	8.0	6.0	10.0
GSBZX84A13	2Y3	13	12.87	13.13	5	30	170	1.0	0.1	8.0	7.0	11.0
GSBZX84A15	2Y4	15	14.85	15.15	5	30	200	1.0	0.1	10.5	9.2	13.0
GSBZX84A16	2Y5	16	15.84	16.16	5	40	200	1.0	0.1	11.2	10.4	14.0
GSBZX84A18	2Y6	18	17.82	18.18	5	45	225	1.0	0.1	12.6	12.4	16.0
GSBZX84A20	2Y7	20	19.80	20.20	5	55	225	1.0	0.1	14.0	14.4	18.0
GSBZX84A22	2Y8	22	21.78	22.22	5	55	250	1.0	0.1	15.4	16.4	20.0
GSBZX84A24	2Y9	24	23.76	24.24	5	70	250	1.0	0.1	16.8	18.4	22.0
GSBZX84A27	2Y10	27	26.73	27.27	2	80	300	0.5	0.1	18.9	21.4	25.3
GSBZX84A30	2Y11	30	29.70	30.30	2	80	300	0.5	0.1	21.0	24.4	29.4
GSBZX84A33	2Y12	33	32.67	33.33	2	80	325	0.5	0.1	23.1	27.4	33.4
GSBZX84A36	2Y13	36	35.64	36.36	2	90	350	0.5	0.1	25.2	30.4	37.4
GSBZX84A39	2Y14	39	38.61	39.39	2	130	350	0.5	0.1	27.3	33.4	41.2
GSBZX84A43	2Y15	43	42.57	43.43	2	100	700	1.0	0.1	32.0	10.0	12.0
GSBZX84A47	2Y16	47	46.53	47.47	2	100	750	1.0	0.1	35.0	10.0	12.0
GSBZX84A51	2Y17	51	50.49	51.51	2	100	750	1.0	0.1	38.0	10.0	12.0
GSBZX84A56	2Y18	56	55.44	56.56	2	135	700	1.0	0.1	39.0	10.0	12.0
GSBZX84A62	2Y19	62	61.38	62.62	2	200	1000	1.0	0.2	47.0	10.0	12.0
GSBZX84A68	2Y20	68	67.32	68.68	2	250	1000	1.0	0.2	52.0	10.0	12.0
GSBZX84A75	2Y21	75	74.25	75.75	2	300	1000	1.0	0.2	57.0	10.0	12.0

GSBZX84A2V4 thru GSBZX84A75

Surface Mount Zener Diodes

V_Z Range: 2.4V to 75V Power Dissipation: 300mW

Typical Characteristic Curves

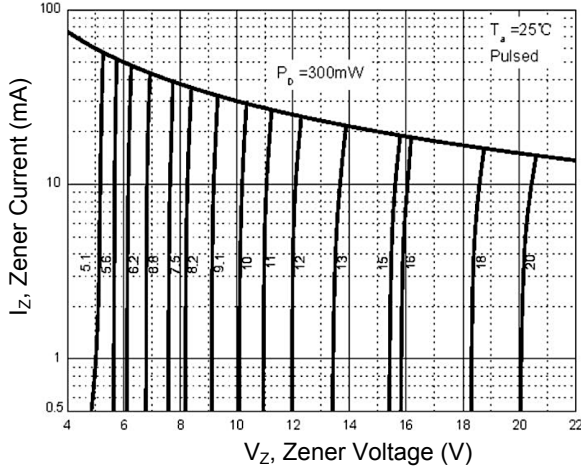


Figure 1. Zener Characteristics (V_Z 5.1V to 20V)

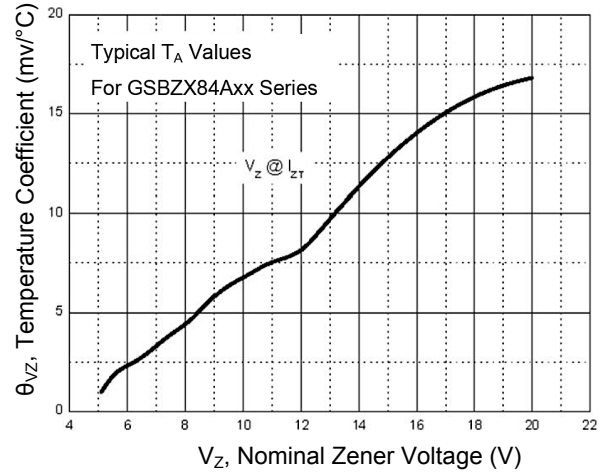


Figure 2. Temperature Coefficients

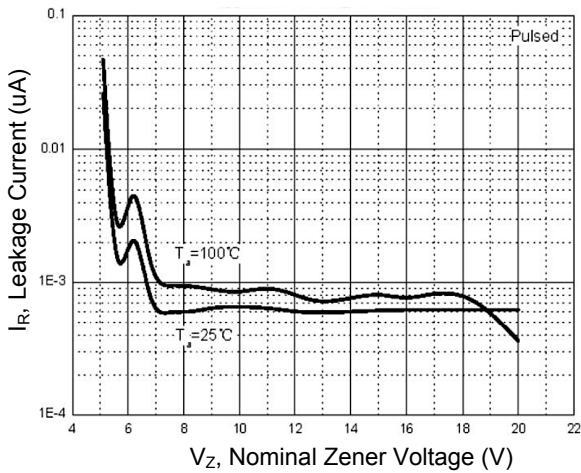


Figure 3. Typical Leakage Current

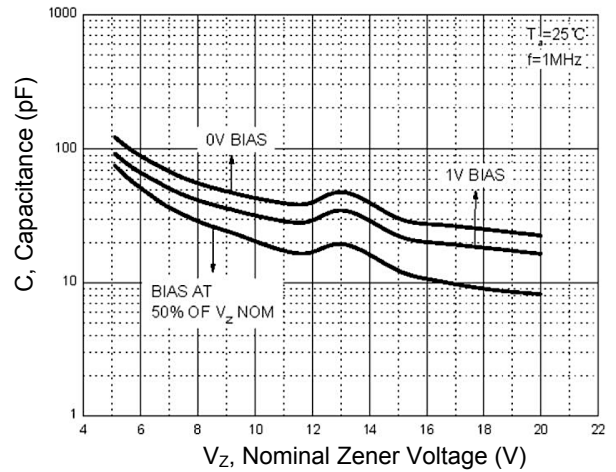


Figure 4. Typical Capacitance

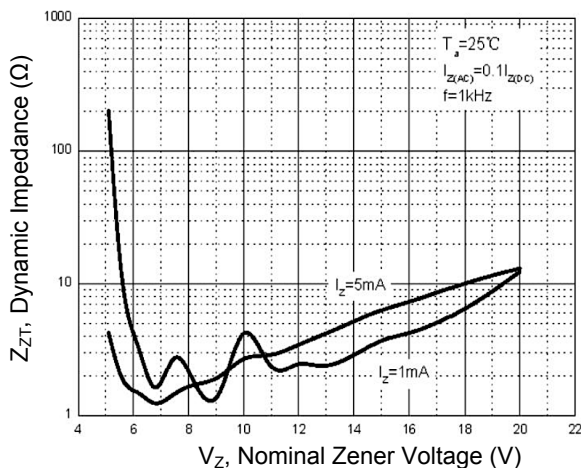


Figure 5. Effect of Zener Voltage on Zener Impedance

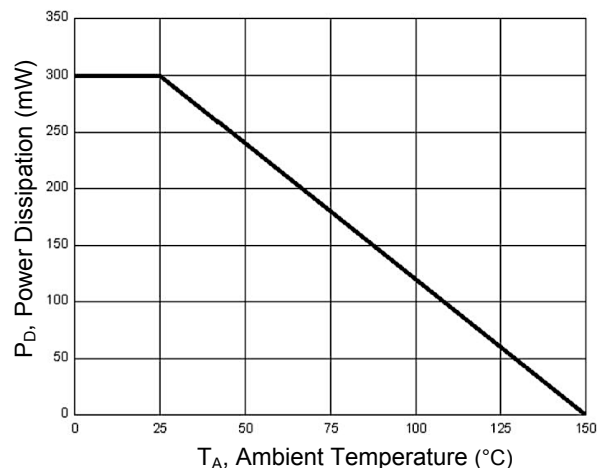


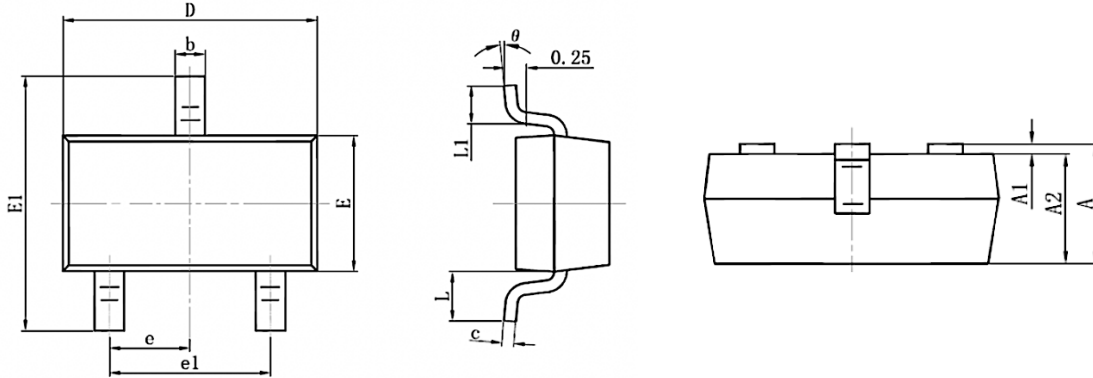
Figure 6. Power Derating Curve

GSBZX84A2V4 thru GSBZX84A75

Surface Mount Zener Diodes

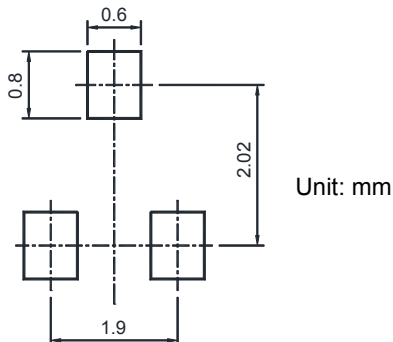
Vz Range: 2.4V to 75V Power Dissipation: 300mW

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.95 TYP		0.037 TYP	
e1	1.80	2.00	0.071	0.079
L	0.55 REF		0.022 REF	
L1	0.30	0.50	0.012	0.020
θ	0°	8°	0°	8°

Recommended Pad Layout



Order Information

Device	Package	Packaging	SPQ
GSBZX84Axx	SOT-23	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com