

## Zener diodes

Order code	Manufacturer code	Description
47-3054	n/a	BZX4V7 4V7 1.3 ZENER DIODE
47-3056	n/a	BZX5V1 5V1 1.3W ZENER DIODE
47-3058	n/a	BZX5V6 5V6 1.3W ZENER DIODE
47-3060	n/a	BZX6V2 6V2 1.3W ZENER DIODE
47-3062	n/a	BZX6V8 6V8 1.3W ZENER DIODE
47-3064	n/a	BZX7V5 7V5 1.3W ZENER DIODE
47-3066	n/a	BZX8V2 8V2 1.3W ZENER DIODE
47-3068	n/a	BZX9V1 9V1 1.3W ZENER DIODE
47-3070	n/a	BZX10 10V 1.3W ZENER DIODE
47-3072	n/a	BZX11 11V 1.3W ZENER DIODE
47-3074	n/a	BZX12 12V 1.3W ZENER DIODE
47-3076	n/a	BZX13 13V 1.3W ZENER DIODE
47-3078	n/a	BZX15 15V 1.3W ZENER DIODE
47-3080	n/a	BZX16 16V 1.3W ZENER DIODE
47-3082	n/a	BZX18 18V 1.3W ZENER DIODE
47-3084	n/a	BZX20 20V 1.3W ZENER DIODE
47-3086	n/a	BZX22 22V 1.3W ZENER DIODE
47-3088	n/a	BZX24 24V 1.3V ZENER DIODE
47-3090	n/a	BZX27 27V 1.3W ZENER DIODE
47-3092	n/a	BZX30 30V 1.3W ZENER DIODE
47-3094	n/a	BZX33 33V 1.3 ZENER DIODE
47-3096	n/a	BZX36 36V 1.3W ZENER DIODE
47-3098	n/a	BZX39 39V 1.3W ZENER DIODE

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

# Semiconductors – Discrete Devices

## BZX Range – 1.3W Zener Diodes

### Absolute Maximum Ratings:

Rating	Symbol	Value	Unit
Power dissipation * (at TA = 25°C)	PTA	1.3	mW
Surge Power dissipation Pulse Width = 10msec	PS	10	mW
Operating and storage junction Temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +175	°C
Maximum lead temperature for soldering During 10 sec at 4mm from case	TL	230	°C

### Electrical Characteristics (TA = 25°C unless otherwise specified):

Characteristics	Symbol	Value	Unit
Thermal resistance Junction to ambient	R <sub>th</sub> (j-a)	115.4	°C/mW
Forward voltage at IF = 200mA	VF	1.0	V

\* On infinite heat sink with 4mm lead length

Device	VZT @ IZT*		rZT @ IZT*	IZT	rZK @ IZK	IZK	Temp. coefficient of zener voltage (%/°C)	IR TA		VR (V)	IZM (mA)	IZSM** (mA)
	Min (V)	Max (V)	Max (Ω)	(mA)	Max (Ω)	(mA)		25 °C Max (μA)	150°C Max (μA)			
BZX 4V7	4.4	5.0	13.	45	500	1.00	-0.01	3.0	10	1.0	215	1667
BZX 5V1	4.8	5.4	10.0	45	500	1.00	0.01	1.0	10	1.5	200	1543
BZX 5V6	5.2	6.0	7.0	45	400	1.00	0.03	1.0	10	2.0	190	1389
BZX 6V2	5.8	6.6	4.0	35	300	1.00	0.04	1.0	10	3.0	170	1263
BZX 6V8	6.4	7.2	3.5	35	300	1.00	0.05	1.0	10	4.0	155	1157
BZX 7V5	7.0	7.9	3.0	35	200	0.50	0.05	1.0	10	4.5	140	1055
BZX 8V2	7.7	8.7	5.0	25	200	0.50	0.06	1.0	10	6.2	130	958
BZX 9V1	8.5	9.6	5.0	25	200	0.50	0.06	1.0	10	6.8	120	868
BZX 10V	9.4	10.6	7.5	25	200	0.50	0.07	0.5	10	7.0	105	786
BZX 11V	10.4	11.6	8.0	20	300	0.50	0.07	0.5	10	8.2	97	718
BZX 12V	11.4	12.7	9.0	20	350	0.50	0.07	0.5	10	9.1	88	656
BZX 13V	12.4	14.1	10.0	20	400	0.50	0.07	0.5	10	10.0	79	591
BZX 15V	13.8	15.6	15.0	15	500	0.50	0.08	0.5	10	11.0	71	531
BZX 16V	15.3	17.1	15.0	15	500	0.50	0.08	0.5	10	12.0	66	487
BZX 18V	16.8	19.1	20.0	15	500	0.50	0.08	0.5	10	13.0	62	436
BZX 20V	18.8	21.2	24.0	10	600	0.50	0.08	0.5	10	15.0	56	393
BZX 22V	20.8	23.3	25.0	10	600	0.50	0.08	0.5	10	16.0	52	358
BZX 24V	22.8	25.6	25.0	10	600	0.50	0.08	0.5	10	18.0	47	326
BZX 27V	25.1	28.9	30.0	8	750	0.25	0.09	0.5	10	20.0	41	288
BZX 30V	28.0	32.0	30.0	8	1000	0.25	0.09	0.5	10	22.0	36	260
BZX 33V	31.0	35.0	35.0	8	1000	0.25	0.09	0.5	10	24.0	33	238
BZX 36V	34.0	38.0	40.0	8	1000	0.25	0.09	0.5	10	27.0	30	219
BZX 39V	37.0	41.0	50.0	6	1000	0.25	0.09	0.5	10	30.0	28	203

\* Pulse Condition: Pulse width 20ms ≤ tp ≤ 50ms, duty cycle <2%

\*\* Rectangular wave form (tp = 10ms)