

ZENER DIODES

$V_Z : 3.6 -- 200 V$

POWER DISSIPATION: 1.3 W

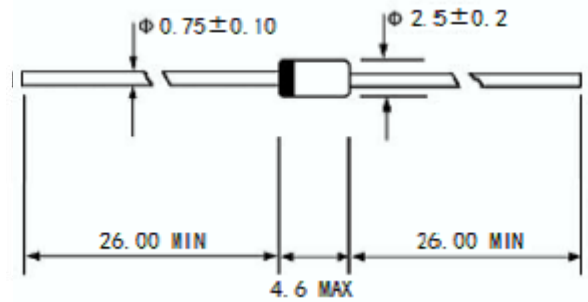
FEATURES

- ◇ Total power dissipation: max. 1.3W
- ◇ The zener voltages are graded according to the international E 24 standard. Replace suffix "C" with "B" for $\pm 2\%$ tolerance.
- ◇ Working voltage range: nom. 3.6 to 200V (E24 range)
- ◇ Non-repetitive peak reverse power dissipation

MECHANICAL DATA

- ◇ Case: JEDEC DO-41, glass
- ◇ Terminals: Axial leads solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: any

DO -- 41(G)



Dimensions in millimeters

Maximum Ratings and Thermal Characteristics

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Power dissipation at $T_A = 25^\circ\text{C}$ (Note 1)	P_{tot}	1.3	W
Forward voltage @ $I_F = 200\text{mA}$	V_F	1.0	V
Maximum thermal resistance junction to ambient	$R_{\theta\text{JA}}$	130	$^\circ\text{C/W}$
Junction temperature	T_J	-55 to +175	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +175	$^\circ\text{C}$

¹⁾ Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

TYPE	Zener ¹⁾ voltage at I_Z V_Z V	Nominal zener voltage		Maximum zener impedance		Maximum reverse leakage current		Admissible Zener current ²⁾		Temp. coefficient of zener voltage at $I_Z=I_{ZT}$	
		r_{ZT} ³⁾	I_{ZT}	r_{ZK} ³⁾	I_{ZK}	$I_R @ V_R$		I_{ZM}	at $t_p=10ms$	$\alpha_{VZ}(\%/^{\circ}C)$	
		(Ω)	(m A)	(Ω)	(m A)	(μ A)	(V)	(m A)	I_{ZSM} (m A)	Min.	Max.
BZX85-C3V6	3.6	<15	60	<500	1.0	<20	1.0	290	2660	-0.080	-0.050
BZX85-C3V9	3.9	<15	60	<500	1.0	<10	1.0	280	2540	-0.070	-0.020
BZX85-C4V3	4.3	<13	50	<500	1.0	<3.0	1.0	250	2440	-0.050	0.010
BZX85-C4V7	4.7	<13	45	<600	1.0	<3.0	1.0	215	2320	-0.030	0.040
BZX85-C5V1	5.1	<10	45	<500	1.0	<1.0	1.5	200	2200	-0.010	0.040
BZX85-C5V6	5.6	<7.0	45	<400	1.0	<1.0	2.0	190	2080	0	0.045
BZX85-C6V2	6.2	<4.0	35	<300	1.0	<1.0	3.0	170	1960	0.010	0.055
BZX85-C6V8	6.8	<3.5	35	<300	1.0	<1.0	4.0	155	1800	0.015	0.060
BZX85-C7V5	7.5	<3.0	35	<200	0.5	<1.0	4.5	140	1620	0.020	0.065
BZX85-C8V2	8.2	<5.0	25	<200	0.5	<1.0	6.2	130	1520	0.030	0.070
BZX85-C9V1	9.1	<5.0	25	<200	0.5	<1.0	6.8	120	1340	0.035	0.075
BZX85-C10	10	<7.0	25	<200	0.5	<0.5	7.5	105	1200	0.045	0.080
BZX85-C11	11	<8.0	20	<300	0.5	<0.5	8.2	97	1100	0.045	0.080
BZX85-C12	12	<9.0	20	<350	0.5	<0.5	9.1	88	1000	0.050	0.085
BZX85-C13	13	<10	20	<400	0.5	<0.5	10	79	900	0.055	0.085
BZX85-C15	15	<10	15	<500	0.5	<0.5	11	71	760	0.055	0.090
BZX85-C16	16	<15	15	<500	0.5	<0.5	12	66	700	0.060	0.090
BZX85-C18	18	<20	15	<500	0.5	<0.5	13	62	600	0.060	0.090
BZX85-C20	20	<24	10	<600	0.5	<0.5	15	56	540	0.060	0.090
BZX85-C22	22	<25	10	<600	0.5	<0.5	16	52	500	0.060	0.095
BZX85-C24	24	<25	10	<600	0.5	<0.5	18	47	450	0.060	0.095
BZX85-C27	27	<30	8.0	<750	0.25	<0.5	20	41	400	0.060	0.095
BZX85-C30	30	<30	8.0	<1000	0.25	<0.5	22	36	380	0.060	0.095
BZX85-C33	33	<35	8.0	<1000	0.25	<0.5	24	33	350	0.060	0.095
BZX85-C36	36	<40	8.0	<1000	0.25	<0.5	27	30	320	0.060	0.095
BZX85-C39	39	<50	6.0	<1000	0.25	<0.5	30	28	296	0.060	0.095
BZX85-C43	43	<50	6.0	<1000	0.25	<0.5	33	26	270	0.060	0.095
BZX85-C47	47	<90	4.0	<1500	0.25	<0.5	36	23	246	0.060	0.095
BZX85-C51	51	<115	4.0	<1500	0.25	<0.5	39	21	226	0.060	0.095
BZX85-C56	56	<120	4.0	<2000	0.25	<0.5	43	19	208	0.060	0.095
BZX85-C62	62	<125	4.0	<2000	0.25	<0.5	47	16	186	0.060	0.095
BZX85-C68	68	<130	4.0	<2000	0.25	<0.5	51	15	171	0.055	0.095
BZX85-C75	75	<135	4.0	<2000	0.25	<0.5	56	14	161	0.055	0.095
BZX85-C82	82	<200	2.7	<3000	0.25	<0.5	62	12	141	0.055	0.095
BZX85-C91	91	<250	2.7	<3000	0.25	<0.5	68	10	127	0.055	0.095
BZX85-C100	100	<350	2.7	<3000	0.25	<0.5	75	9.4	116	0.055	0.095
BZX85-C110	110	<450	2.7	<4000	0.25	<0.5	82	8.6	105	0.055	0.095
BZX85-C120	120	<550	2.0	<4500	0.25	<0.5	91	7.8	96	0.055	0.095
BZX85-C130	130	<700	2.0	<5000	0.25	<0.5	100	7.0	89	0.055	0.095
BZX85-C150	150	<1000	2.0	<6000	0.25	<0.5	110	6.4	77	0.055	0.095
BZX85-C160	160	<1100	1.5	<6500	0.25	<0.5	120	5.8	72	0.050	0.095
BZX85-C180	180	<1200	1.5	<7000	0.25	<0.5	130	5.2	64	0.050	0.095
BZX85-C200	200	<1500	1.5	<8000	0.25	<0.5	150	4.7	58	0.050	0.095

Notes:(1) Measured with pulses $t_p=5ms$

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(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

(3) Measured with $f=1KHz$

FIG.1 -- BREAKDOWN CHARACTERISTICS

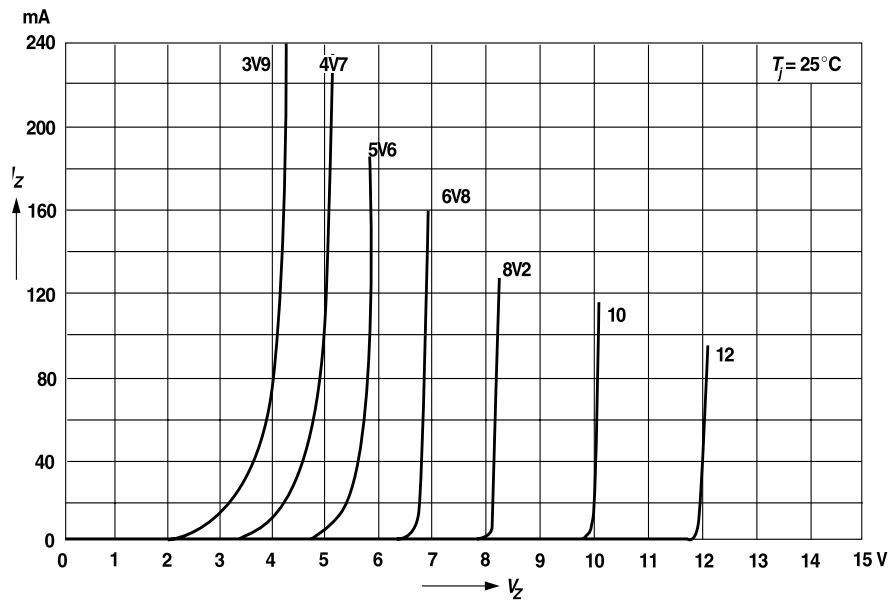
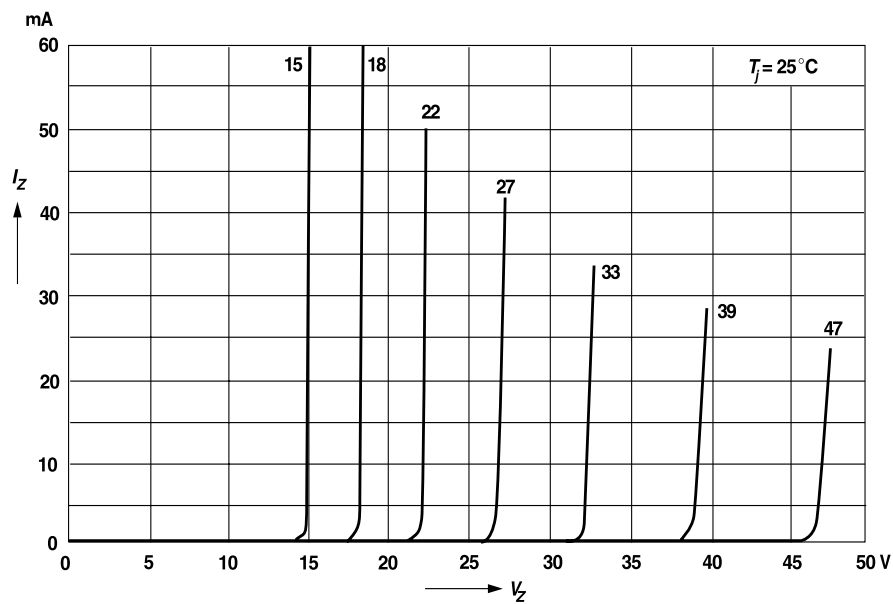
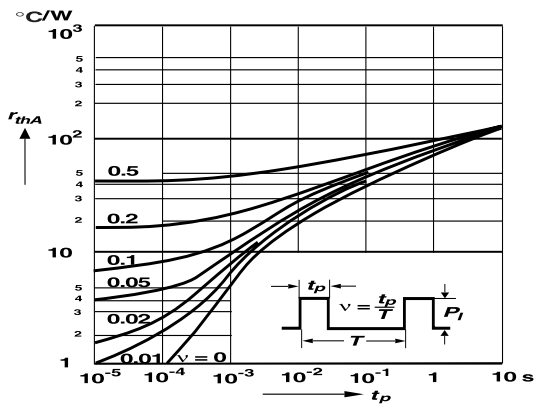


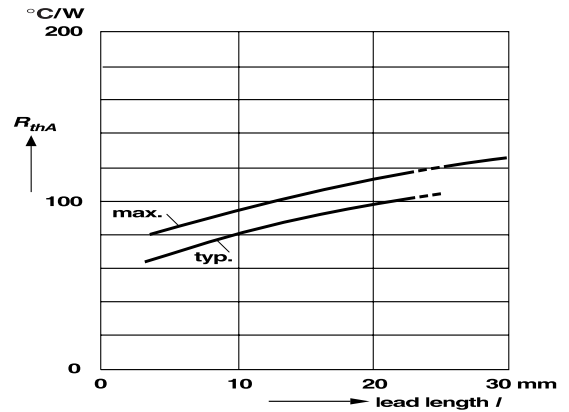
FIG.2 -- BREAKDOWN CHARACTERISTICS



**FIG.3 -- PULSE THERMAL RESISTANCE
VERSUS PULSE DURATION**



**FIG.4 -- THERMAL RESISTANCE
VERSUS LEAD LENGTH**



**FIG.5 -- ADMISSIBLE POWER DISSIPATION
VERSUS AMBIENT TEMPERATURE**

