TAYCHIPST

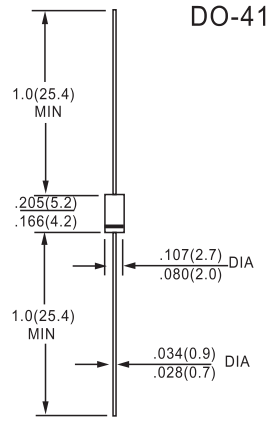
ZENER DIODES

BZY97 SERIES

3.9V-200V 1.5W

FEATURES

- Complete voltage range 3.9 to 200 V
- For use in stablilizing and clipping circuits with high power rating.
- Smaller voltage tolerances are available



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings and Thermal Characteristics

(T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Power dissipation at T_A=60°C (Note 1)	P_{tot}	1.5	W
Maximum thermal resistance junction to ambient	$R_{\theta JA}$	60	K/W
Junction temperature	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Notes

1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

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Electrical Characteristics

Part Number	Device marking code	Zener Voltage Range[1]		Dynamic Resistance	Temperature Coefficient of Zener Voltage	Test Current	Leakage Current	Reverse Voltage	Admis. Zener Current	
		V_Z@I_{ZT}		r_{zj}@I_{ZT}, f=1kH_Z	@I_{ZT}	I_{ZT}	I_R	V_R	I_Z @T_{amb}=60°C	I_{ZSM}, tp=10ms
		V	V	Ω	Avz(10^{-4}/K)	m A	μ A	V	m A	A
		Min.	Max.		typ					
BZY97C3V9	Y3V9	3.7	4.1	7.0	-0.025	100	15	1.0	366	3.7
BZY97C4V3	Y4V3	4.0	4.6	7.0	-0.020	100	10	1.0	327	3.4
BZY97C4V7	Y4V7	4.4	5.0	7.0	-0.020	100	5.0	1.0	300	3.1
BZY97C5V1	Y5V1	4.8	5.4	5.0	-0.010	100	3.0	1.0	278	2.8
BZY97C5V6	Y5V6	5.2	6.0	2.0	0.020	100	1.0	1.0	250	2.6
BZY97C6V2	Y6V2	5.8	6.6	2.0	0.050	100	1.0	1.0	227	2.3
BZY97C6V8	Y6V8	6.4	7.2	2.0	0.350	100	1.0	1.0	208	2.1
BZY97C7V5	Y7V5	7.0	7.9	2.0	0.350	100	1.0	2.0	190	1.9
BZY97C8V2	Y8V2	7.7	8.7	2.0	0.055	100	1.0	3.5	175	1.8
BZY97C9V1	Y9V1	8.5	9.6	4.0	0.055	50	1.0	3.5	156	1.6
BZY97C10	Y10	9.4	10.6	4.0	0.070	50	1.0	5.0	142	1.4
BZY97C11	Y11	10.4	11.6	7.0	+5 to +10	50	1.0	5.0	129	1.3
BZY97C12	Y12	11.4	12.7	7.0	+5 to +10	50	1.0	7.0	118	1.2
BZY97C13	Y13	12.4	14.1	10	+5 to +10	50	1.0	7.0	106	1.1
BZY97C15	Y15	13.8	15.8	10	+5 to +10	50	1.0	10	96	1.0
BZY97C16	Y16	15.3	17.1	15	+6 to +11	25	1.0	10	88	0.90
BZY97C18	Y18	16.8	19.1	15	+6 to +11	25	1.0	10	79	0.81
BZY97C20	Y20	18.8	21.2	15	+6 to +11	25	1.0	10	71	0.73
BZY97C22	Y22	20.8	23.3	15	+6 to +11	25	1.0	12	64	0.66
BZY97C24	Y24	22.8	25.6	15	+6 to +11	25	1.0	12	59	0.60
BZY97C27	Y27	25.1	28.9	15	+6 to +11	25	1.0	14	52	0.53
BZY97C30	Y30	28	32	15	+6 to +11	25	1.0	14	47	0.48
BZY97C33	Y33	31	35	15	+6 to +11	25	1.0	17	43	0.44
BZY97C36	Y36	34	38	40	+6 to +11	10	1.0	17	40	0.4
BZY97C39	Y39	37	41	40	+6 to +11	10	1.0	20	37	0.38
BZY97C43	Y43	40	46	45	+7 to +12	10	1.0	20	33	0.33
BZY97C47	Y47	44	50	45	+7 to +12	10	1.0	24	30	0.31
BZY97C51	Y51	48	54	60	+7 to +12	10	1.0	24	28	0.28
BZY97C56	Y56	52	60	60	+7 to +12	10	1.0	28	25	0.26
BZY97C62	Y62	58	66	80	+7 to +12	10	1.0	28	23	0.23
BZY97C68	Y68	64	72	80	+7 to +12	10	1.0	34	21	0.21
BZY97C75	Y75	70	79	100	+7 to +12	10	1.0	34	19	0.19
BZY97C82	Y82	77	88	100	+7 to +12	10	1.0	41	17	0.18
BZY97C91	Y91	85	96	200	+8 to +13	5.0	1.0	41	16	0.16
BZY97C100	Y100	94	106	200	+8 to +13	5.0	1.0	50	14	0.15
BZY97C110	Y110	104	116	250	+8 to +13	5.0	1.0	50	13	0.13
BZY97C120	Y120	114	127	250	+8 to +13	5.0	1.0	60	12	0.12
BZY97C130	Y130	124	141	300	+8 to +13	5.0	1.0	60	11	0.11
BZY97C150	Y150	138	156	300	+8 to +13	5.0	1.0	75	10	0.10
BZY97C160	Y160	153	171	350	+8 to +13	5.0	1.0	75	9.0	0.09
BZY97C180	Y180	168	191	350	+8 to +13	5.0	1.0	90	8.0	0.08
BZY97C200	Y200	188	212	350	+8 to +13	5.0	1.0	90	7.0	0.07

Note:1)Tested with pulses tp=5 ms

RATINGS AND CHARACTERISTIC CURVES BZY97 SERIES

Figure 1. Admissible Power Dissipation vs. Ambient Temperature

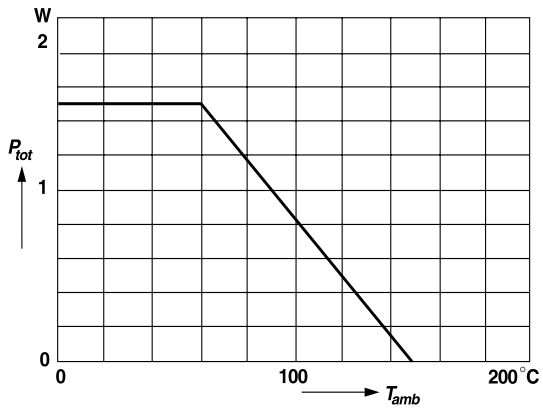

Figure 2. Pulse Thermal Resistance vs. Pulse Duration

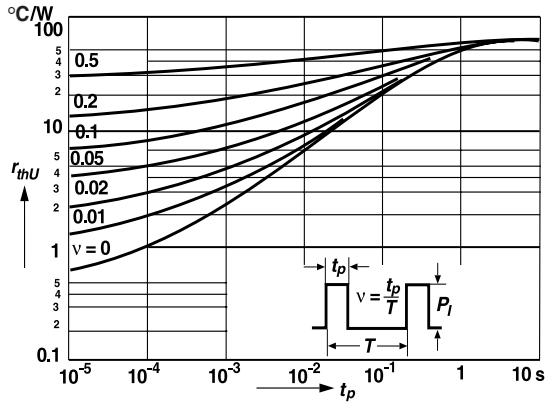

Figure 3. Dynamic Resistance vs. Zener Current

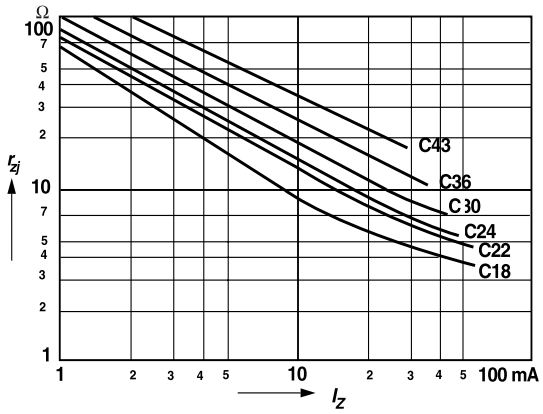

Figure 4. Dynamic Resistance vs. Zener Current

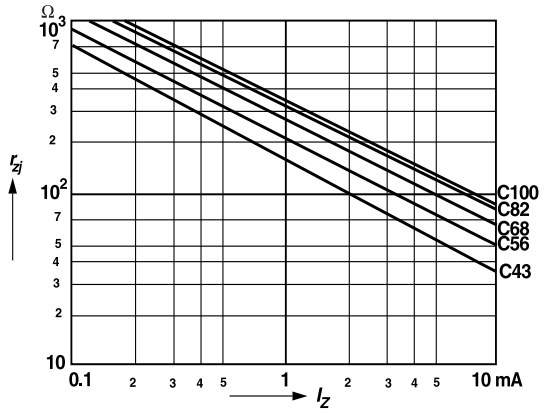

Figure 5. Dynamic Resistance vs. Zener Current

