1.5 W Zener Diodes

DO-204AL (DO-41)

Voltage	Power Dissipation
10 to 200 V	1.5 W

HYPERECTIFIER®

FEATURE

- Glass passivated chip junction
- Hiperectifier structure for high reliability
- Cavity-free glass-passivated junction
- Low leakage current
- High surge current and zener capability
- Low differential resistance
- Low forward voltage drop
- Solder dip 260 ºC, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC
- Halogen-free available according to IEC 61249-2-21 definition

Pb e3 RoHS COMPLIANT HALOGEN FREE

MECHANICAL DATA

- **Case:** DO-204AL (DO-41). Epoxy meets UL 94V-0 flammability rating.
- **Polarity:** Color band denotes cathode end.
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test.

TYPICAL APPLICATIONS

Used for basic regulation functions in most electronic applications, Zener diodes offer a cheaper alternative to IC solutions.

Maximum Ratings and Electrical Characteristics at 25 °C

SYMBOL	TYPE NUMBER	VALUE	UNIT
P_{tot}	Power dissipation at Tamb = 60 ºC	1.5	W
P_{ZSM}	Non repetitive peak zener dissipation (t = 10ms)	40	W
T_j	Operatin Temperature Range	-55 to +175	ºC
T_{stg}	Storage Temperature Range	-55 to +175	ºC
V_F	Max. forward voltage drop at I_F = 1.0 A	1.1	V
R_{thj-a}	Max. thermal resistance at 10 mm. Lead length	50	ºC/W

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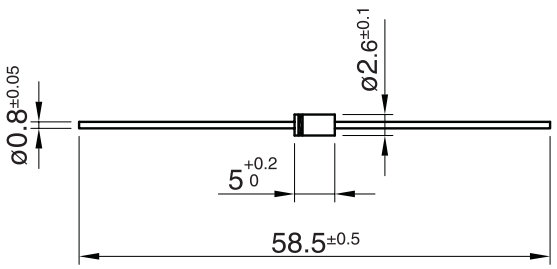
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
BZY97C20GP AMP	AMP	AMMO BOX	5,000	0.325
BZY97C20GP TR	TR	14" diameter tape and reel	5,000	0.325
BZY97C20GP HF AMP	AMP	AMMO BOX	5,000	0.325
BZY97C20GP HF TR	TR	14" diameter tape and reel	5,000	0.325

Package Outline Dimensions: (mm) DO-204AL (DO-41)



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Type	Zener Voltage Range V_Z at I_{ZT}	Maximum Zener Impedance Z_{ZT} at I_{ZT}	Typical Temperature Coefficient at I_{ZT}	Test Current I_{ZT}	Min. Reverse Voltage at I_R = 1 µA V_R
	(V)	(Ω)	(% / °C)	(mA)	(V)
BZY97C10 GP	9.4 - 10.6	4	+ 0.070	50	5.0
BZY97C11 GP	10.4 - 11.6	7	+ 0.075	50	5.0
BZY97C12 GP	11.4 - 12.7	7	+ 0.075	50	7.0
BZY97C13 GP	12.4 - 14.1	10	+ 0.075	50	7.0
BZY97C15 GP	13.8 - 15.8	10	+ 0.075	50	10
BZY97C16 GP	15.3 - 17.1	15	+ 0.085	25	10
BZY97C18 GP	16.8 - 19.1	15	+ 0.085	25	10
BZY97C20 GP	18.8 - 21.2	15	+ 0.085	25	10
BZY97C22 GP	20.8 - 23.3	15	+ 0.085	25	12
BZY97C24 GP	22.8 - 25.6	15	+ 0.085	25	12
BZY97C27 GP	25.1 - 28.9	15	+ 0.085	25	14
BZY97C30 GP	28 - 32	15	+ 0.085	25	14
BZY97C33 GP	31 - 35	15	+ 0.085	25	17
BZY97C36 GP	34 - 38	40	+ 0.085	10	17
BZY97C39 GP	37 - 41	40	+ 0.085	10	20
BZY97C43 GP	40 - 46	45	+ 0.095	10	20
BZY97C47 GP	44 - 50	45	+ 0.095	10	24
BZY97C51 GP	48 - 54	60	+ 0.095	10	24
BZY97C56 GP	52 - 60	60	+ 0.095	10	28
BZY97C62 GP	58 - 66	80	+ 0.105	10	28
BZY97C68 GP	64 - 72	80	+ 0.105	10	34
BZY97C75 GP	70 - 79	100	+ 0.105	10	34
BZY97C82 GP	77 - 88	100	+ 0.105	10	41
BZY97C91 GP	85 - 96	200	+ 0.11	5	41
BZY97C100 GP	94 - 106	200	+ 0.11	5	50
BZY97C110 GP	104 - 116	250	+ 0.11	5	50
BZY97C120 GP	114 - 127	250	+ 0.11	5	60
BZY97C130 GP	124 - 141	300	+ 0.11	5	60
BZY97C150 GP	138 - 156	300	+ 0.11	5	75
BZY97C160 GP	153 - 171	400	+ 0.11	5	75
BZY97C180 GP	168 - 191	500	+ 0.11	5	90
BZY97C200 GP	188 - 212	500	+ 0.11	5	90

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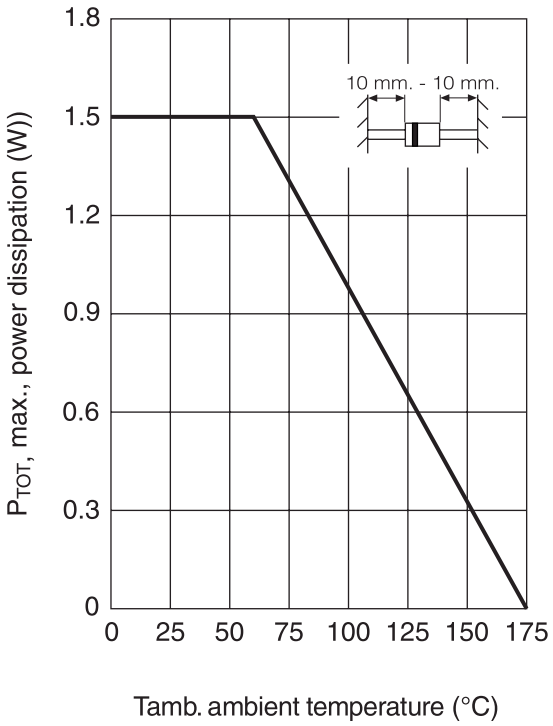
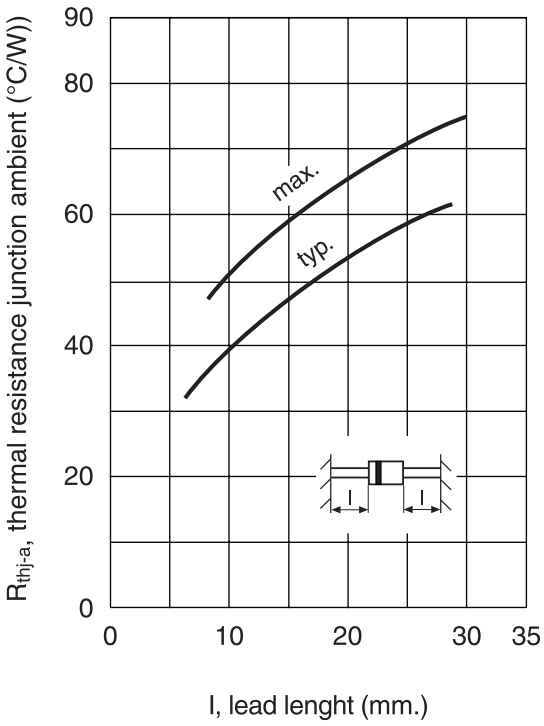
Rating and Characteristics (Ta 25 ºC unless otherwise noted)

MAXIMUM CONTINUOUS POWER DISSIPATION



THERMAL RESISTANCE



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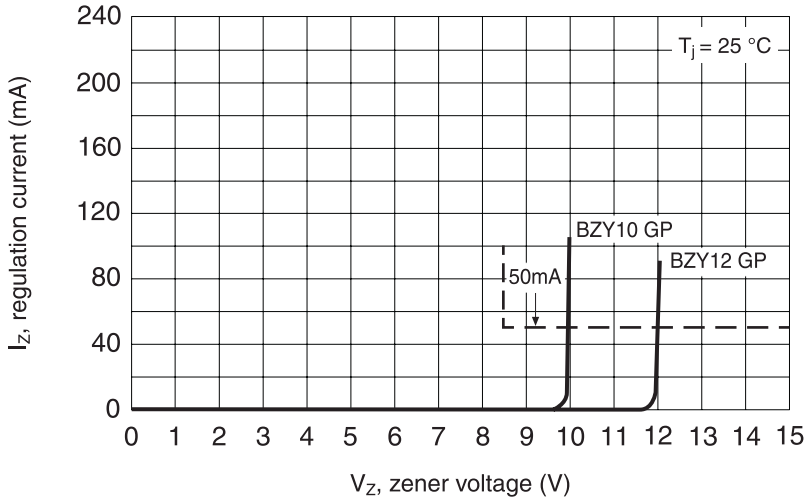
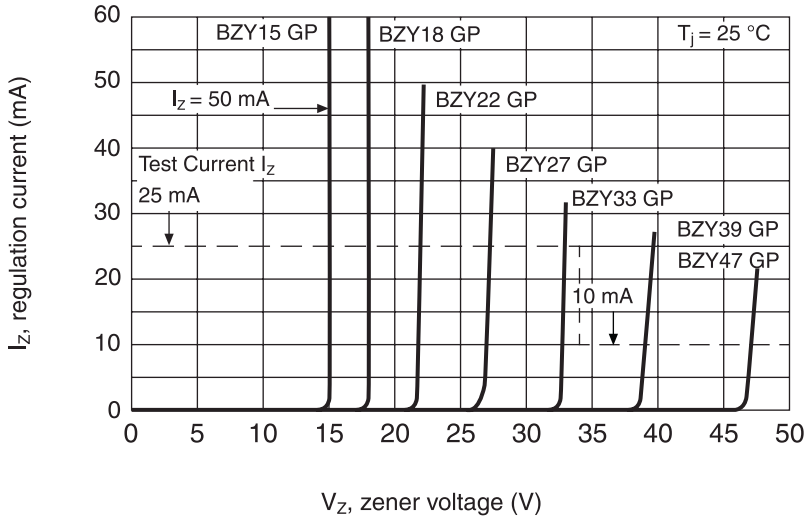
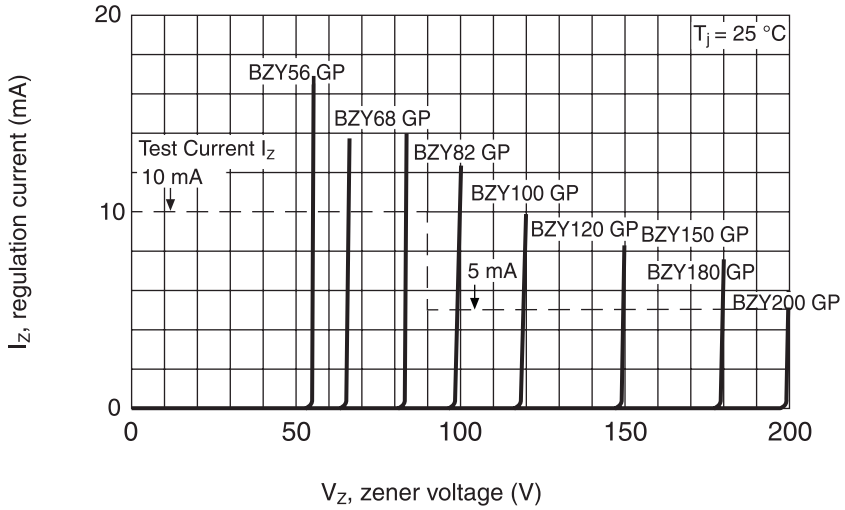
BREAKDOWN CHARACTERISTICS







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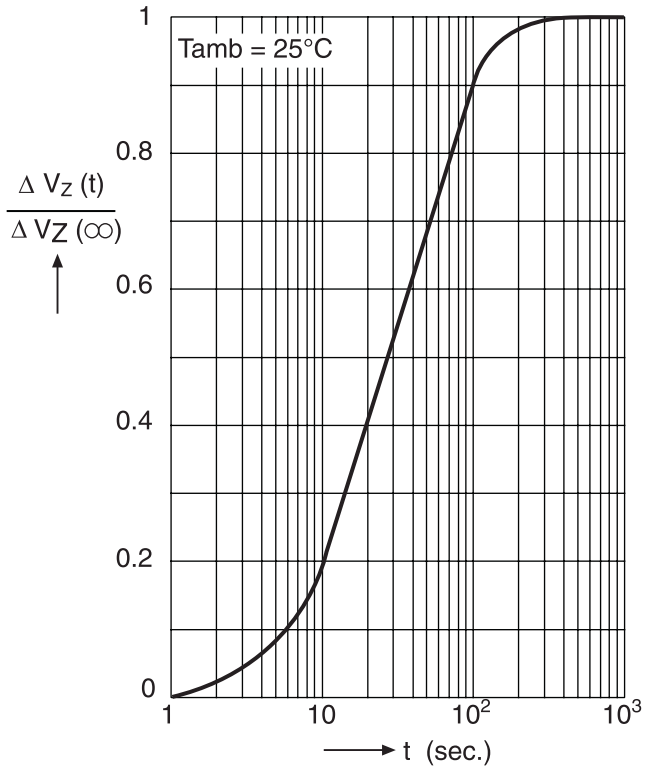
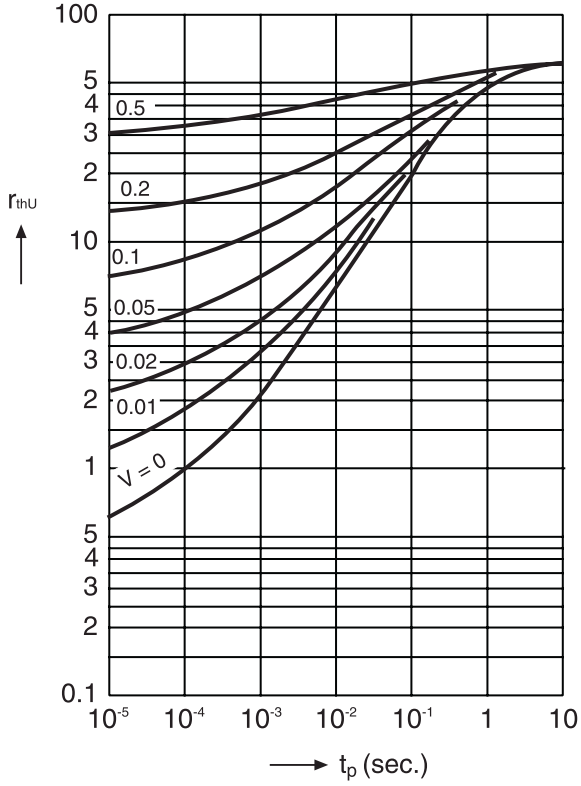
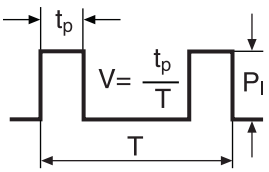


Relative change of Zener voltage versus turn-on time.



Pulse thermal resistance versus pulse duration. Valid provided that leads are kept at ambient temperature at a distance of 10mm. from case.



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Revision History

DATE	REVISION	DESCRIPTION OF CHANGES
14-Dec-2015	0	Original Data Sheet
16-Feb-2018	1	Remove Tolerance Series ± 5%

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