2.0 W Glass Passivated Zener Diodes

DO-15

Voltage	Current
6.2 to 200 V	2.0 W

HYPERECTIFIER®

FEATURES

- Glass passivated chip junction
- Hyperectifier structure for high reliability
- Cavity-free glass-passivated junction
- Low leakage current
- High surge current and zener capability
- Low differential resistance
- Tolerance series ± 5%
- Low forward voltage drop
- Solder dip 260°C, 10s
- AEC-Q101 qualified
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC

Pb e3 RoHS COMPLIANT

MECHANICAL DATA

- **Case:** DO-15
  Epoxy meets UL 94V-0 flammability rating.
- **Polatity:** For uni-directional types the color band denotes cathode end, no marking on bi-directional types
- **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 = 25 °C	2.0	W
P_{ZSM}	Non repetitive peak zener dissipation (t = 10ms)	60	W
T_j	Operating Temperature Range	-65 to + 175	°C
T_{stg}	Storage Temperature Range	-65 to + 175	°C
R_{thj-a}	Max. thermal resistance at 10 mm. lead length	40	°C/W

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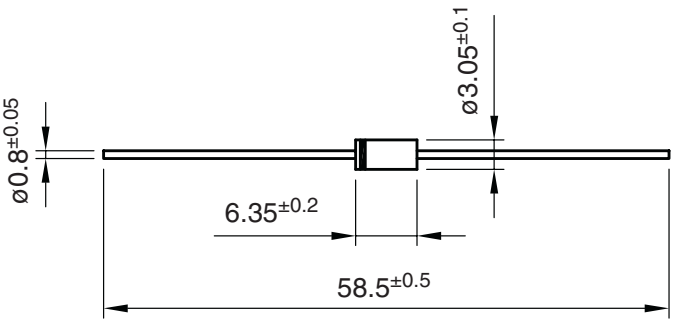
Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
ZY6V2GP AMP	AMP	AMMO BOX	4,000	0.378
ZY6V2GP TR	TR	14" diameter tape and reel	4,000	0.378

Package Outline Dimensions: (mm) DO-15



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Ratings and Characteristics (Ta 25 °C unless otherwise noted)

Type	Zener (1) Voltage Range V_Z at I_{ZT}	Maximum Zener Impedance Z_{ZT} at I_{ZT}	Test Current I_{ZT}	Temp coef. of Zener Volt.	Min Reverse Voltage at I_R = 1 µA V_R	Max Regulator Current at 45 °C I_{ZM}
	(V)	(Ω)	(mA)	(% / °C)	(V)	(mA)
ZY6V2GP	5.8-6.6	2	100	+0.025	1.0	245
ZY6V8GP	6.4-7.2	2	100	+0.035	2	220
ZY7V5GP	7.0-7.9	2	100	+0.035	2	200
ZY8V2GP	7.7-8.7	2	100	+0.055	3.5	180
ZY9V1GP	8.5-9.6	4	50	+0.055	6.9	165
ZY10GP	9.4-10.6	4	50	+0.070	7.5	145
ZY11GP	10.4-11.6	7	50	+0.075	8.3	135
ZY12GP	11.4-12.7	7	50	+0.075	9.1	120
ZY13GP	12.4-14.1	10	50	+0.075	9.9	110
ZY15GP	13.8-15.8	10	50	+0.075	11.4	98
ZY16GP	15.3-17.1	15	25	+0.085	12.2	90
ZY18GP	16.8-19.1	15	25	+0.085	13.7	80
ZY20GP	18.8-21.2	15	25	+0.085	15.2	72
ZY22GP	20.8-23.3	15	25	+0.085	16.7	66
ZY24GP	22.8-25.6	15	25	+0.085	18.2	60
ZY27GP	25.1-28.9	15	25	+0.085	20.5	53
ZY30GP	28-32	15	25	+0.085	22.8	48
ZY33GP	31-35	15	25	+0.085	25	44
ZY36GP	34-38	40	10	+0.085	27.4	40
ZY39GP	37-41	40	10	+0.085	29.6	37
ZY43GP	40-46	45	10	+0.095	32.7	33
ZY47GP	44-50	45	10	+0.095	35.7	30
ZY51GP	48-54	60	10	+0.095	38.8	27
ZY56GP	52-60	60	10	+0.095	42.5	25
ZY62GP	58-66	80	10	+0.105	47.1	21
ZY68GP	64-72	80	10	+0.105	51.7	20
ZY75GP	70-79	100	10	+0.105	57	18
ZY82GP	77-88	100	10	+0.105	62.4	16
ZY91GP	85-96	200	5	+0.110	69.2	15
ZY100GP	94-106	200	5	+0.110	76	13
ZY110GP	104-116	250	5	+0.110	83.5	12
ZY120GP	114-127	250	5	+0.110	91.2	11
ZY130GP	124-141	300	5	+0.110	98.2	10
ZY150GP	138-156	300	5	+0.110	114	9
ZY160GP	153-171	350	5	+0.110	122	8.5
ZY180GP	168-191	400	5	+0.110	137	8.0
ZY200GP	188-212	450	5	+0.110	152	7.5

(1) Tested with pulses.
Pulse test: tp ≤ 50 ms; δ < 2%

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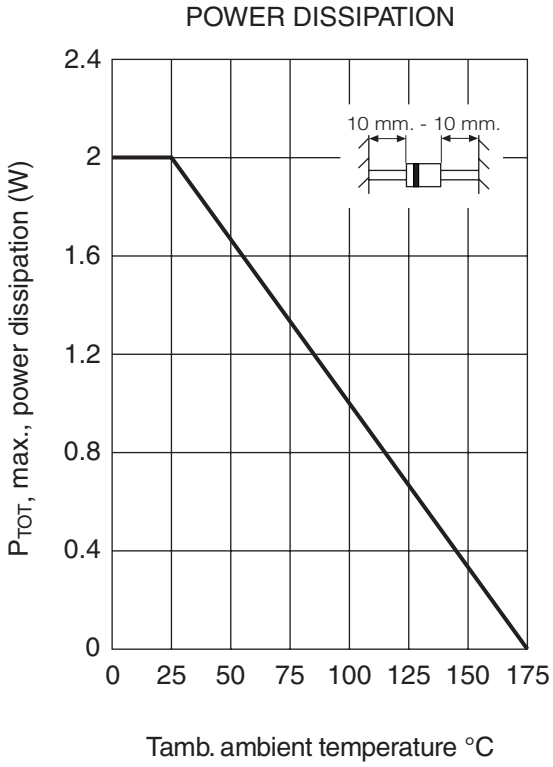

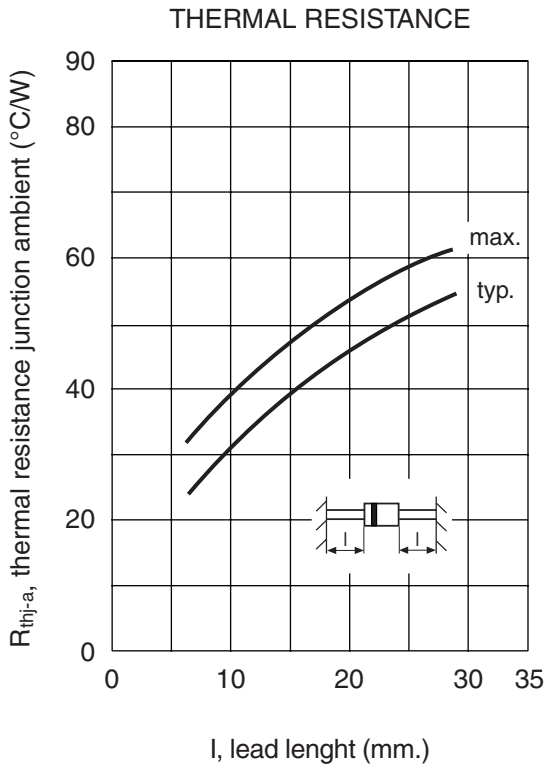

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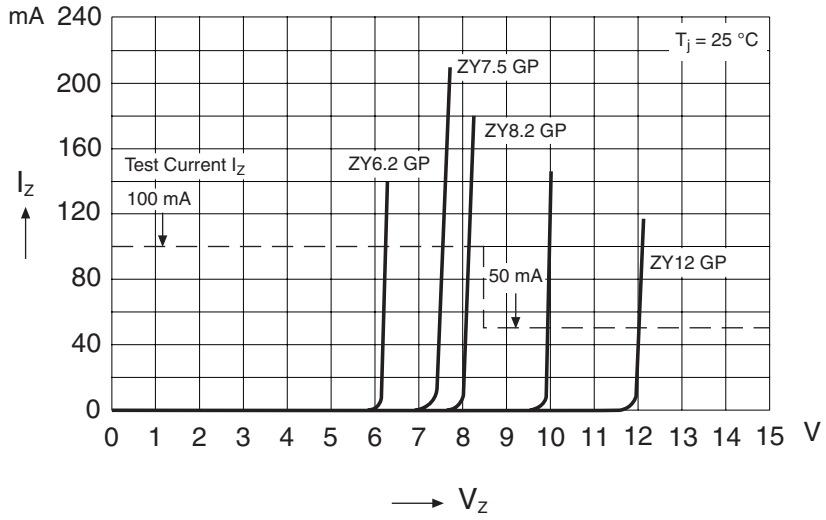
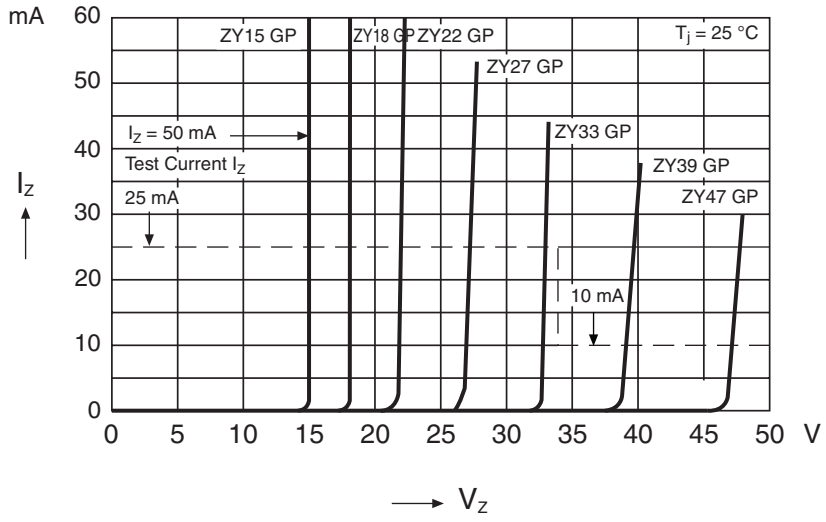
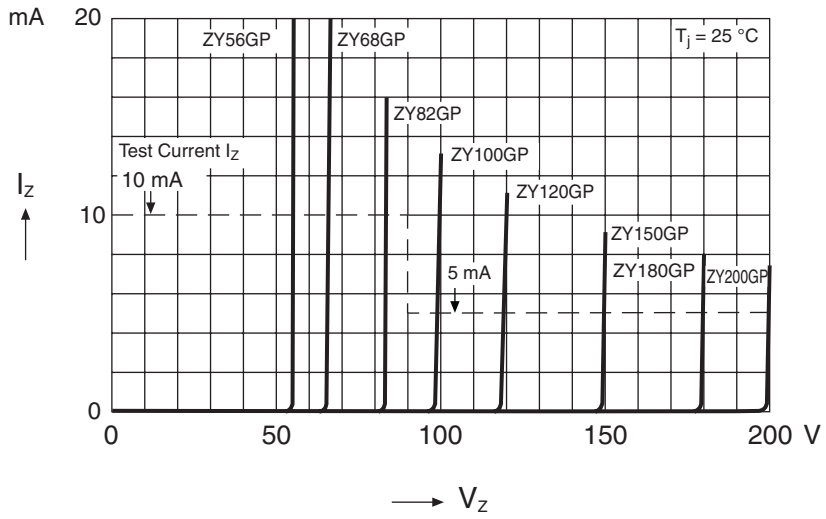
BREAKDOWN CHARACTERISTICS







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