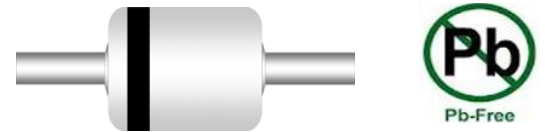


Small Signal Product

1W DO-41 Zener Voltage Regulators

FEATURES

- Zener voltage range 3.3 to 56Volts
- DO-41 package (JEDEC)
- Through-hole device type mounting
- Hermetically sealed glass
- Compression bonded construction
- All external surfaces are corrosion resistant and terminals are readily solderable
- Solder hot dip tin(Sn) lead finish
- Pb free and RoHS compliant

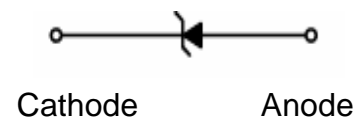


DO-41



MECHANICAL DATA

- Lead: Pure tin plated, lead free, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode
- High temperature soldering guaranteed: ' 260°C/10 s
- Weight: 0.270~0.290 grams
- Marking code: 1N47XXG for ± 5% Vz



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | |
|---|------------------|---------------|-------------|
| PARAMETER | SYMBOL | VALUE | UNIT |
| Power Dissipation | P _D | 1 | W |
| Thermal Resistance Junction to Lead | R _{jl} | 53.5 | °C/W |
| Thermal Resistance Junction to Ambient | R _{ja} | 100 | °C/W |
| Operating Temperature Range | T _{OPR} | - 65 to + 200 | °C |
| Storage Temperature Range | T _{STG} | - 65 to + 200 | °C |

Note: These ratings are limiting values above which the serviceability of the diode may be impaired

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ELECTRICAL CHARACTERISTICS (Ratings at $T_A=25^\circ\text{C}$ ambient temperature unless otherwise specified)

 V_F Forward Voltage = 1.2 V Maximum @ $I_F = 200$ mA for all types

| Device Type | $V_Z @ I_{ZT}$ (V) Typ. | I_{ZT} (mA) | $Z_{ZT} @ O_{ZK}$ (Ω) Max. | I_{ZK} (mA) | $Z_{ZK} @ I_{ZK}$ (Ω) Max. | $I_R @ V_R$ (μA) Max. | V_R (V) |
|-------------|-------------------------------|------------------|---|------------------|---|--|--------------|
| 1N4728G | 3.3 | 76 | 10 | 1 | 400 | 100 | 1 |
| 1N4729G | 3.6 | 69 | 10 | 1 | 400 | 100 | 1 |
| 1N4730G | 3.9 | 64 | 9 | 1 | 400 | 50 | 1 |
| 1N4731G | 4.3 | 58 | 9 | 1 | 400 | 10 | 1 |
| 1N4732G | 4.7 | 53 | 8 | 1 | 500 | 10 | 1 |
| 1N4733G | 5.1 | 49 | 7 | 1 | 550 | 10 | 1 |
| 1N4734G | 5.6 | 45 | 5 | 1 | 600 | 10 | 2 |
| 1N4735G | 6.2 | 41 | 2 | 1 | 700 | 10 | 3 |
| 1N4736G | 6.8 | 37 | 3.5 | 1 | 700 | 10 | 4 |
| 1N4737G | 7.5 | 34 | 4 | 0.5 | 700 | 10 | 5 |
| 1N4738G | 8.2 | 31 | 4.5 | 0.5 | 700 | 10 | 6 |
| 1N4739G | 9.1 | 28 | 5 | 0.5 | 700 | 10 | 7 |
| 1N4740G | 10 | 25 | 7 | 0.25 | 700 | 10 | 7.6 |
| 1N4741G | 11 | 23 | 8 | 0.25 | 700 | 5 | 8.4 |
| 1N4742G | 12 | 21 | 9 | 0.25 | 700 | 5 | 9.1 |
| 1N4743G | 13 | 19 | 10 | 0.25 | 700 | 5 | 9.9 |
| 1N4744G | 15 | 17 | 14 | 0.25 | 700 | 5 | 11.4 |
| 1N4745G | 16 | 15.5 | 16 | 0.25 | 700 | 5 | 12.2 |
| 1N4746G | 18 | 14 | 20 | 0.25 | 700 | 5 | 13.7 |
| 1N4747G | 20 | 12.5 | 22 | 0.25 | 750 | 5 | 15.2 |
| 1N4748G | 22 | 11.5 | 23 | 0.25 | 750 | 5 | 16.7 |
| 1N4749G | 24 | 10.5 | 25 | 0.25 | 750 | 5 | 18.2 |
| 1N4750G | 27 | 9.5 | 35 | 0.25 | 750 | 5 | 20.6 |
| 1N4751G | 30 | 8.5 | 40 | 0.25 | 1000 | 5 | 22.8 |
| 1N4752G | 33 | 7.5 | 45 | 0.25 | 1000 | 5 | 25.1 |
| 1N4753G | 36 | 7 | 50 | 0.25 | 1000 | 5 | 27.4 |
| 1N4754G | 39 | 6.5 | 60 | 0.25 | 1000 | 5 | 29.7 |
| 1N4755G | 43 | 6 | 70 | 0.25 | 1500 | 5 | 32.7 |
| 1N4756G | 47 | 5.5 | 80 | 0.25 | 1500 | 5 | 35.8 |
| 1N4757G | 51 | 5 | 95 | 0.25 | 1500 | 5 | 38.8 |
| 1N4758G | 56 | 4.5 | 110 | 0.25 | 2000 | 5 | 42.6 |

 Notes : 1. TOLERANCE AND TYPE NUMBER DESIGNATION (V_Z)

 The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.

2. SPECIAL AVAILABLE INCLUDE

Nominal zener voltages shown and tighter voltage, for detailed information on price, availability and delivery, contact your nearest Taiwan Semiconductor representative.

 3. ZENER VOLTAGE (V_Z) MEASUREMENT

 The zener voltage (V_Z) is tested under pulse condition. The measured V_Z is guaranteed to be within specification with device junction in thermal equilibrium.

 4. ZENER IMPEDANCE (Z_Z) DERIVATION

 The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an RMS value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK} .

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ORDERING INFORMATION

| PART NO. | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
|----------------------|---------------------|----------------------------|----------------|-----------------|
| 1N47xxG (Note1,2) | R0 | G | DO-41 | 5K / 14" Reel |
| | A0 | G | DO-41 | 3K / BOX (Ammo) |

Note 1: "xx" is Device Code from "28" through "58"

Note 2: Whole series with green compound.

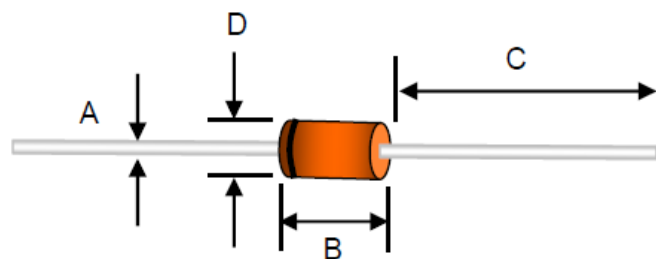
EXAMPLE

| PREFERRED PART NO. | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------------------|-----------------|---------------------|----------------------------|--------------------|
| 1N4728G R0G | 1N4728G | R0 | G | Green compound |

Small Signal Product

PACKAGE OUTLINE DIMENSIONS

DO-41



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 0.50 | 0.90 | 0.020 | 0.035 |
| B | 3.50 | 5.20 | 0.138 | 0.205 |
| C | 22.00 | -- | 0.866 | -- |
| D | 1.80 | 2.80 | 0.071 | 0.110 |

MARKING DIAGRAM



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