

Obsolete

M.C.C.

Micro Commercial Components



Micro Commercial Components
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**DL4614
THRU
DL4125**

Features

- Zener Voltage Range = 1.8V to 47V
- Double Slug Type Construction
- Metallurgical Bonded Construction
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Moisture Sensitivity: Level 1

**500mW Silicon
Zener Diodes**

Mechanical Data

- Case: Double slug type, hermetically sealed glass
- Marking : Cathode band and type number

Maximum Ratings

| | Symbol | Value | Units |
|--|------------|------------|--------------------|
| Max. Steady State Power Dissipation at $T_L < 75^\circ\text{C}$, Lead Length=3/8" | P_D | 500 | mW |
| Junction Temperature | T_J | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to 175 | $^\circ\text{C}$ |
| Thermal Resistance, Junction to lead @3/8" lead length from body | R_{thJL} | 250 | $^\circ\text{C/W}$ |

MINIMELF

Cathode Mark

A

B

C

| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INCHES | | MM | | |
| A | .134 | .142 | 3.40 | 3.60 | |
| B | .008 | .016 | .20 | .40 | |
| C | .055 | .059 | 1.40 | 1.50 | ∅ |

SUGGESTED SOLDER PAD LAYOUT

0.105

0.075

0.030

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | Symbol | Maximum | Unit |
|---|--------|---------|------|
| Max. Forward Voltage @ $I_F=200\text{mA}$ | V_F | 1.1 | V |

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 1.1 V Max @ I_F = 200mA for all types)

| Device ⁽¹⁾ | Zener Voltage ⁽²⁾ | | | Maximum Zener Current ⁽³⁾ (I _{ZM}) | Reverse Leakage Current ⁽⁴⁾ | | Zener Impedance ⁽⁵⁾ |
|-----------------------|---|-----|-------|--|--|-------|----------------------------------|
| | V _Z (Volts) @ I _{ZT} =250UA | | | | I _R @V _R | | Z _{ZT} @I _{ZT} |
| | Min | Nom | Max | mA | µA(Max) | Volts | ohm(Max) |
| DL4614 | 1.71 | 1.8 | 1.89 | 120 | 7.5 | 1 | 1200 |
| DL4615 | 1.90 | 2.0 | 2.10 | 110 | 5.0 | 1 | 1250 |
| DL4616 | 2.09 | 2.2 | 2.31 | 100 | 4.0 | 1 | 1300 |
| DL4617 | 2.28 | 2.4 | 2.52 | 95 | 2.0 | 1 | 1400 |
| DL4618 | 2.565 | 2.7 | 2.835 | 90 | 1.0 | 1 | 1500 |
| DL4619 | 2.85 | 3.0 | 3.15 | 87 | 0.8 | 1 | 1600 |
| DL4620 | 3.135 | 3.3 | 3.465 | 85 | 7.5 | 1.5 | 1650 |
| DL4621 | 3.42 | 3.6 | 3.78 | 83 | 7.5 | 2 | 1700 |
| DL4622 | 3.705 | 3.9 | 4.095 | 80 | 5.0 | 2 | 1650 |
| DL4623 | 4.085 | 4.3 | 4.515 | 77 | 4.0 | 2 | 1600 |
| DL4624 | 4.465 | 4.7 | 4.935 | 75 | 10.0 | 3 | 1550 |
| DL4625 | 4.845 | 5.1 | 5.355 | 70 | 10.0 | 3 | 1500 |
| DL4626 | 5.32 | 5.6 | 5.88 | 65 | 10.0 | 4 | 1400 |
| DL4627 | 5.89 | 6.2 | 6.51 | 61 | 10.0 | 5 | 1200 |
| DL4099 | 6.46 | 6.8 | 7.14 | 56 | 10.0 | 5.17 | 200 |
| DL4100 | 7.125 | 7.5 | 7.875 | 51 | 10.0 | 5.70 | 200 |
| DL4101 | 7.79 | 8.2 | 8.61 | 46 | 1.0 | 6.24 | 200 |
| DL4102 | 8.265 | 8.7 | 9.135 | 44 | 1.0 | 6.61 | 200 |
| DL4103 | 8.645 | 9.1 | 9.555 | 42 | 1.0 | 6.92 | 200 |
| DL4104 | 9.5 | 10 | 10.5 | 38 | 1.0 | 7.60 | 200 |
| DL4105 | 10.45 | 11 | 11.55 | 35 | .05 | 8.44 | 200 |
| DL4106 | 11.4 | 12 | 12.6 | 32 | .05 | 8.12 | 200 |
| DL4107 | 12.35 | 13 | 13.65 | 29 | .05 | 9.857 | 200 |
| DL4108 | 13.3 | 14 | 14.7 | 27 | .05 | 10.65 | 200 |
| DL4109 | 14.25 | 15 | 15.75 | 25 | .05 | 11.40 | 100 |
| DL4110 | 15.2 | 16 | 16.8 | 24 | .05 | 12.15 | 100 |
| DL4111 | 16.15 | 17 | 17.85 | 22 | .05 | 12.92 | 100 |
| DL4112 | 17.1 | 18 | 18.9 | 21 | .05 | 13.67 | 100 |
| DL4113 | 18.05 | 19 | 19.95 | 20 | .05 | 14.44 | 150 |
| DL4114 | 19 | 20 | 21 | 19 | .01 | 15.20 | 150 |
| DL4115 | 20.9 | 22 | 23.1 | 17 | .01 | 16.72 | 150 |
| DL4116 | 22.8 | 24 | 25.2 | 16 | .01 | 18.25 | 150 |
| DL4117 | 23.75 | 25 | 26.25 | 15 | .01 | 19.00 | 150 |
| DL4118 | 25.65 | 27 | 28.35 | 14 | .01 | 20.45 | 150 |
| DL4119 | 26.6 | 28 | 29.4 | 14 | .01 | 21.28 | 200 |
| DL4120 | 28.5 | 30 | 31.5 | 13 | .01 | 22.80 | 200 |
| DL4121 | 31.35 | 33 | 34.65 | 12 | .01 | 25.08 | 200 |
| DL4122 | 34.2 | 36 | 37.8 | 11 | .01 | 27.38 | 200 |
| DL4123 | 37.05 | 39 | 40.95 | 9.8 | .01 | 29.65 | 200 |
| DL4124 | 40.85 | 43 | 45.15 | 8.9 | .01 | 32.65 | 250 |
| DL4125 | 44.65 | 47 | 49.35 | 8.1 | .01 | 35.75 | 250 |

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

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

2. ZENER VOLTAGE (V_Z) MEASUREMENT Nominal zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at 30°C ±1°C and 3/8" lead length.

3. MAXIMUM ZENER CURRENT RATINGS (I_{ZM}) This data was calculated using nominal voltages. The maximum handling current capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.

4.Reverse Leakage Current(IR)reverse leakage current are guaranteed and measured at V_R shown on the table .

5. Zener Impedance(Z_{ZT}) DerivationThe Zener impedance is derived from the 60 cycle ac voltage.which results when an Ac current having an rms value to 10% of the DC zener current (I_{ZT}) is superimposed on I_{ZT}.

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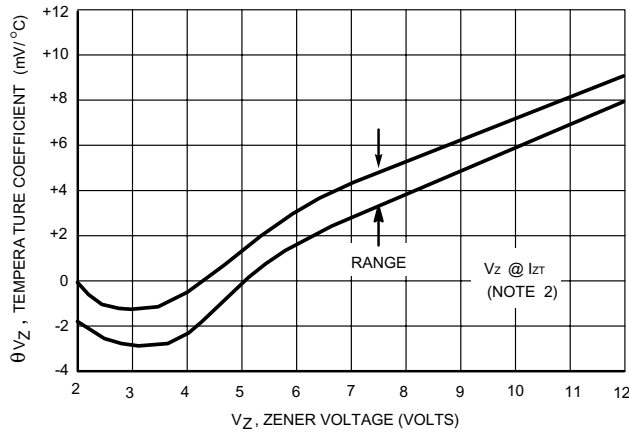


Figure 1. Range for Units to 12 Volts

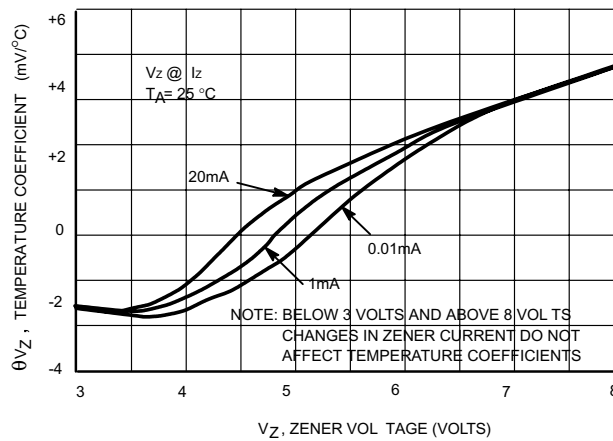


Figure 2. Effect of Zener Current

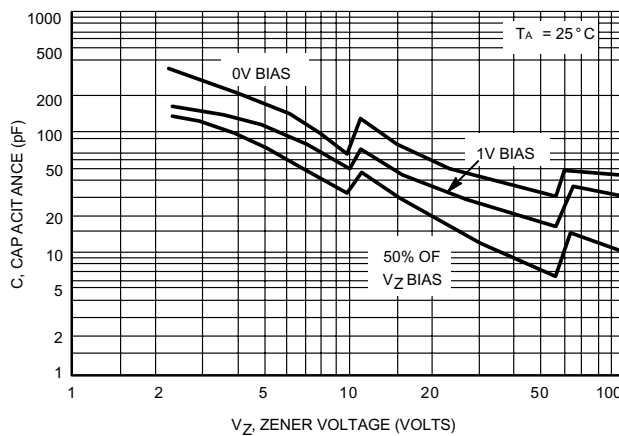


Figure 3. Typical Capacitance 2.4-100 Volts

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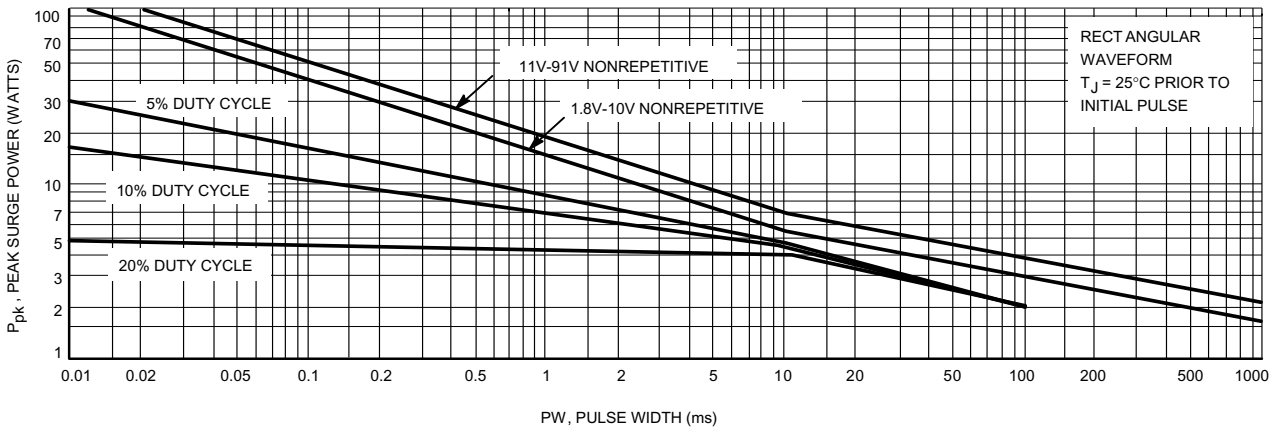


Figure 4. Maximum Surge Power 1.8-91 Volts

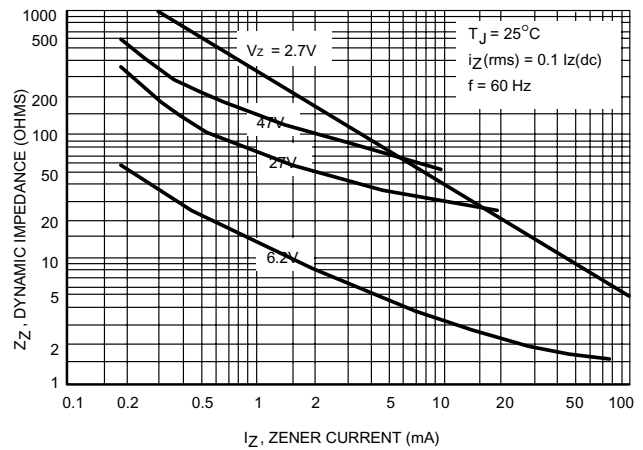


Figure 5. Effect of Zener Current on Zener Impedance

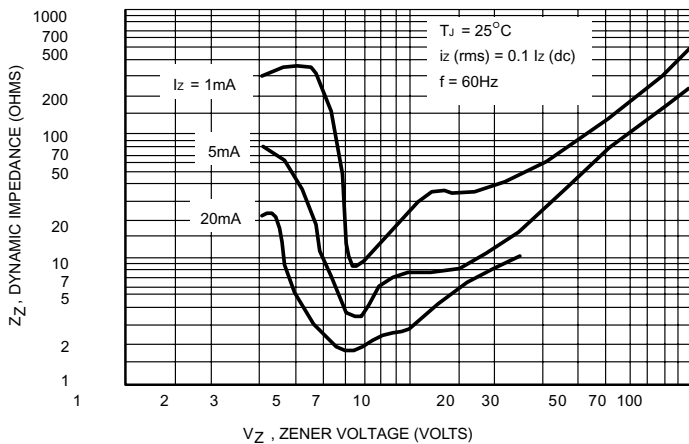


Figure 6. Effect of Zener Voltage on Zener Impedance

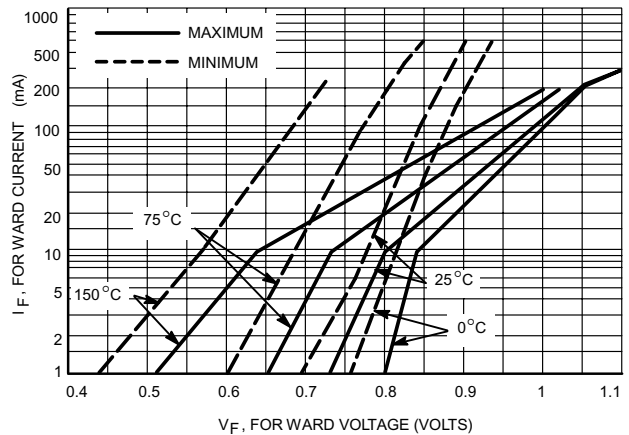


Figure 7. Typical Forward Characteristics



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Ordering Information :

| Device | Packing |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

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