

TOSHIBA Diode Silicon Epitaxial Planar Type

015AZ2.0~015AZ12

Constant Voltage Regulation Applications

- Small package
- Nominal voltage tolerance about $\pm 2.5\%$ (2.0V~12V)

Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|------------------|---------|------|
| Power dissipation | P* | 150 | mW |
| Junction temperature | T _j | 125 | °C |
| Storage temperature range | T _{stg} | -55~125 | °C |

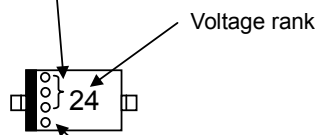
* Mounted on a glass epoxy circuit board of 20 × 20mm, Pad dimension of 4 × 4mm.

Electrical Characteristics

(See Page 2~3)

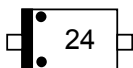
Marking

VZ additional ranking
upper --- X rank , middle --- Y rank , lower --- Z rank



Decimal point ● : VZ=(VZ ranking voltage) X 0.1, nil : VZ=VZ ranking voltage

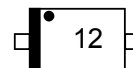
Example1:015AZ2.4-X



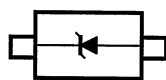
Example2:015AZ2.4-Z



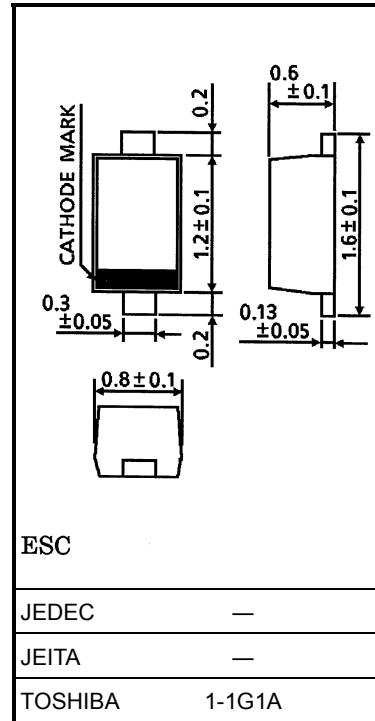
Example3:015AZ12-X



Pin Assignment (top view)



Unit: mm



Weight: 1.4 mg (typ.)

Electrical Characteristics (Ta = 25°C)

| Type No. | | Zener Voltage | | I _Z (mA) | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | |
|-------------|---|----------------------|------|------------------------|--------------------|------------------------|------------------------|------------------------|---------------------|-----------------------|
| | | * V _Z (V) | | | Z _Z (Ω) | I _Z (mA) | Z _{ZK} (Ω) | I _Z (mA) | I _R (μA) | V _R (V) |
| | | Min | Max | Max | Max | Max | Max | Max | | |
| 015AZ2.0 ** | X | 1.85 | 2.05 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 0.5 |
| | Z | 1.95 | 2.15 | | | | | | | |
| 015AZ2.2 ** | X | 2.05 | 2.26 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | Z | 2.16 | 2.38 | | | | | | | |
| 015AZ2.4 | X | 2.28 | 2.50 | 5 | 100 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | Z | 2.40 | 2.60 | | | | | | | |
| 015AZ2.7 | X | 2.50 | 2.75 | 5 | 110 | 5 | 1000 | 0.5 | 120 | 1.0 |
| | Z | 2.65 | 2.90 | | | | | | | |
| 015AZ3.0 | X | 2.80 | 3.05 | 5 | 120 | 5 | 1000 | 0.5 | 50 | 1.0 |
| | Z | 2.95 | 3.20 | | | | | | | |
| 015AZ3.3 | X | 3.10 | 3.35 | 5 | 130 | 5 | 1000 | 0.5 | 20 | 1.0 |
| | Z | 3.25 | 3.50 | | | | | | | |
| 015AZ3.6 | X | 3.40 | 3.65 | 5 | 130 | 5 | 1000 | 0.5 | 10 | 1.0 |
| | Z | 3.55 | 3.80 | | | | | | | |
| 015AZ3.9 | X | 3.70 | 3.97 | 5 | 130 | 5 | 1000 | 0.5 | 10 | 1.0 |
| | Z | 3.87 | 4.10 | | | | | | | |
| 015AZ4.3 | X | 4.00 | 4.23 | 5 | 130 | 5 | 1000 | 0.5 | 5 | 1.0 |
| | Y | 4.13 | 4.35 | | | | | | | |
| | Z | 4.25 | 4.50 | | | | | | | |
| 015AZ4.7 | X | 4.40 | 4.63 | 5 | 120 | 5 | 1000 | 0.5 | 5 | 1.0 |
| | Y | 4.53 | 4.76 | | | | | | | |
| | Z | 4.66 | 4.90 | | | | | | | |
| 015AZ5.1 | X | 4.80 | 5.07 | 5 | 70 | 5 | 1000 | 0.5 | 1 | 1.5 |
| | Y | 4.97 | 5.24 | | | | | | | |
| | Z | 5.14 | 5.40 | | | | | | | |
| 015AZ5.6 | X | 5.30 | 5.63 | 5 | 40 | 5 | 900 | 0.5 | 1 | 2.5 |
| | Y | 5.43 | 5.81 | | | | | | | |
| | Z | 5.61 | 6.00 | | | | | | | |
| 015AZ6.2 | X | 5.80 | 6.20 | 5 | 30 | 5 | 500 | 0.5 | 1 | 3.0 |
| | Y | 6.00 | 6.39 | | | | | | | |
| | Z | 6.19 | 6.60 | | | | | | | |
| 015AZ6.8 | X | 6.40 | 6.80 | 5 | 25 | 5 | 150 | 0.5 | 0.5 | 5.0 |
| | Y | 6.60 | 7.02 | | | | | | | |
| | Z | 6.82 | 7.20 | | | | | | | |

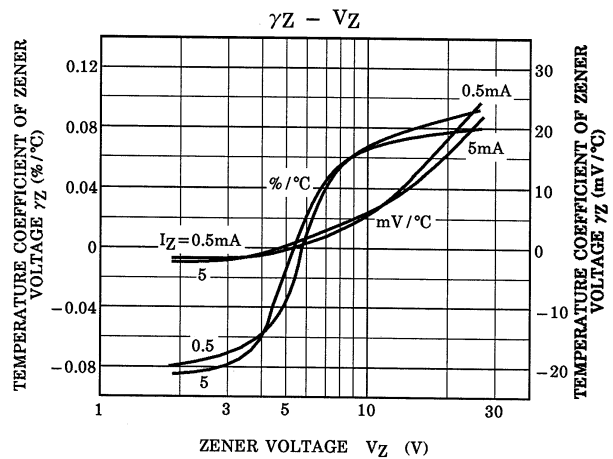
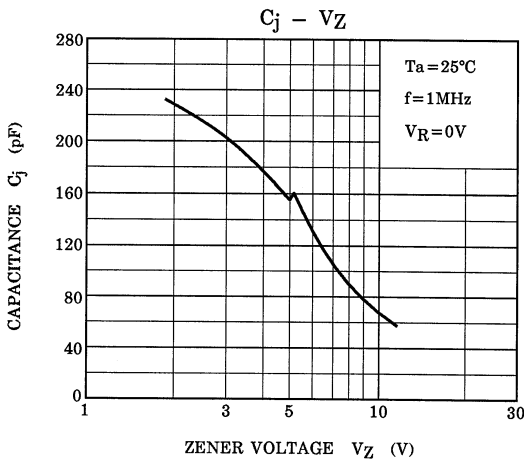
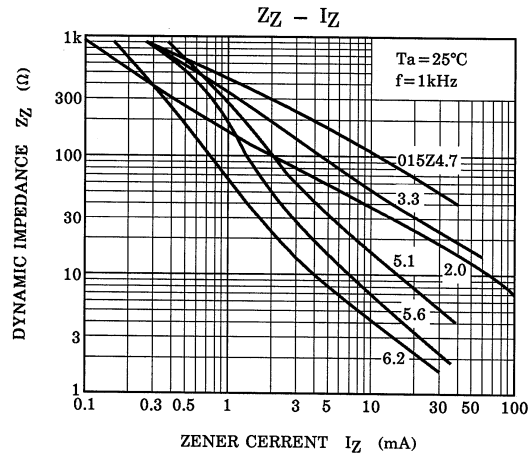
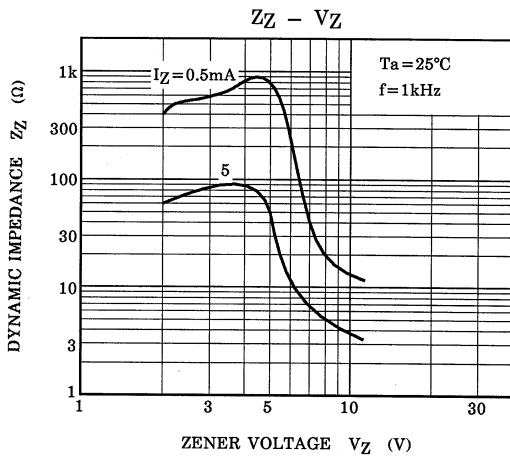
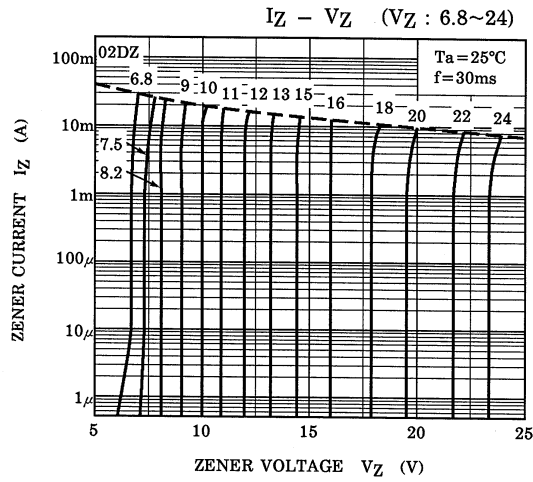
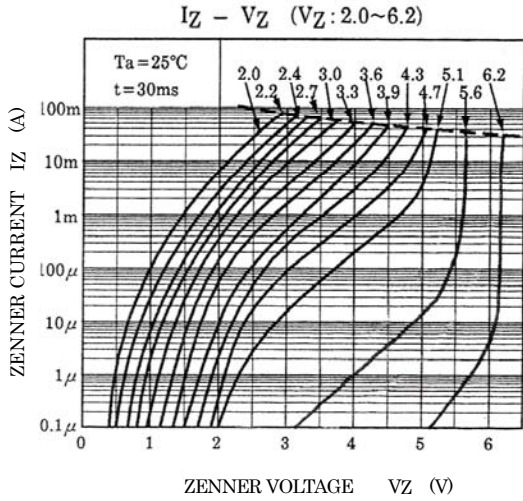
* : Test time: t = 30ms

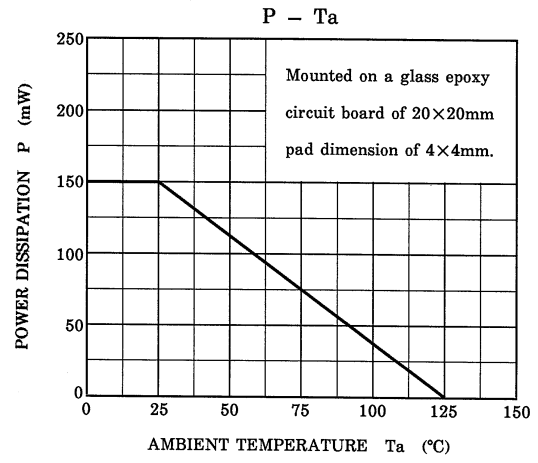
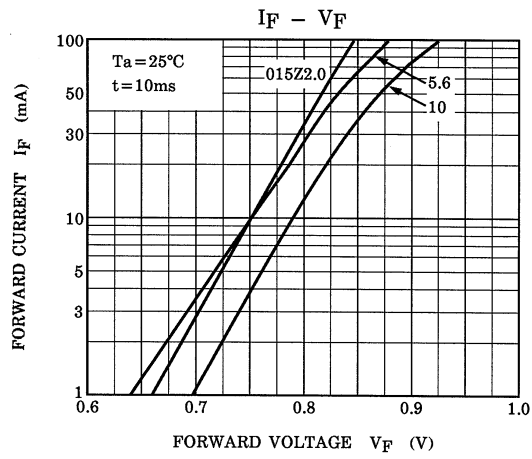
** : Product by order.

Electrical Characteristics (Ta = 25°C)

| Type No. | | Zener Voltage | | I _Z (mA) | Dynamic Impedance | | Knee Dynamic Impedance | | Reverse Current | |
|----------|---|----------------------|-------|---------------------|--------------------|---------------------|------------------------|---------------------|---------------------|--------------------|
| | | * V _Z (V) | | | Z _Z (Ω) | I _Z (mA) | Z _{ZK} (Ω) | I _Z (mA) | I _R (μA) | V _R (V) |
| | | Min | Max | | Max | | Max | | Max | |
| 015AZ7.5 | X | 7.00 | 7.43 | 5 | 23 | 5 | 120 | 0.5 | 0.5 | 6.0 |
| | Y | 7.23 | 7.66 | | | | | | | |
| | Z | 7.46 | 7.90 | | | | | | | |
| 015AZ8.2 | X | 7.70 | 8.16 | 5 | 20 | 5 | 120 | 0.5 | 0.5 | 6.5 |
| | Y | 7.96 | 8.43 | | | | | | | |
| | Z | 8.23 | 8.70 | | | | | | | |
| 015AZ9.1 | X | 8.50 | 9.00 | 5 | 18 | 5 | 120 | 0.5 | 0.5 | 7.0 |
| | Y | 8.80 | 9.30 | | | | | | | |
| | Z | 9.10 | 9.60 | | | | | | | |
| 015AZ10 | X | 9.40 | 9.93 | 5 | 15 | 5 | 120 | 0.5 | 0.5 | 8.0 |
| | Y | 9.73 | 10.26 | | | | | | | |
| | Z | 10.06 | 10.60 | | | | | | | |
| 015AZ11 | X | 10.40 | 10.98 | 5 | 15 | 5 | 120 | 0.5 | 0.5 | 8.5 |
| | Y | 10.73 | 11.26 | | | | | | | |
| | Z | 11.06 | 11.60 | | | | | | | |
| 015AZ12 | X | 11.40 | 11.93 | 5 | 15 | 5 | 110 | 0.5 | 0.5 | 9.0 |
| | Y | 11.73 | 12.26 | | | | | | | |
| | Z | 12.06 | 12.60 | | | | | | | |

* : Test time: t = 30ms





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