

# SCHOTTKY DIODES

## Silicon Schottky Barrier Diodes in DO-35 Package

for general purpose applications with low forward voltage drop and very fast switching times.

Using the type designations LL101A, LL103A, and so on, these Schottky Barrier diodes are available in the MiniMELF package with the same electrical characteristics.

| Type    | Peak Inv. Voltage PIV | Power Dissipation at 25°C | Junction and Storage Temp. | Forward Voltage Drop $V_F$ at $I_F$ |       |        |       | Reverse Current $I_R$ at $V_R$ |      | Capacitance at $V_F = V_R = 0$ , $f = 1$ MHz | Reverse Recovery Time $t_r$ | Conditions                        |
|---------|-----------------------|---------------------------|----------------------------|-------------------------------------|-------|--------|-------|--------------------------------|------|--|-----------------------------|-----------------------------------|
|         | Volts                 | max. mW                   | max. °C                    | max. V                              | at mA | max. V | at mA | max. $\mu$ A                   | at V | max. pF                                      | max. ns                     |                                   |
| SD101A* | 60                    | 400                       | 200                        | 0.41                                | 1     | 1.0    | 15    | 0.2                            | 50   | 2.0  | 1                           | $I_F = I_R = 5$ mA to 0.1 $I_R$   |
| SD101B  | 50                    | 400                       | 200                        | 0.40                                | 1     | 0.95   | 15    | 0.2                            | 40   | 2.1  | 1                           | $I_F = I_R = 5$ mA to 0.1 $I_R$   |
| SD101C  | 40                    | 400                       | 200                        | 0.39                                | 1     | 0.90   | 15    | 0.2                            | 30   | 2.2  | 1                           | $I_F = I_R = 5$ mA to 0.1 $I_R$   |
| SD103A  | 40                    | 400                       | 125                        | 0.37                                | 20    | 0.6    | 200   | 5.0                            | 30   | 50   | 10                          | $I_F = I_R = 200$ mA to 0.1 $I_R$ |
| SD103B  | 30                    | 400                       | 125                        | 0.37                                | 20    | 0.6    | 200   | 5.0                            | 20   | 50   | 10                          | $I_F = I_R = 200$ mA to 0.1 $I_R$ |
| SD103C  | 20                    | 400                       | 125                        | 0.37                                | 20    | 0.6    | 200   | 5.0                            | 10   | 50   | 10                          | $I_F = I_R = 200$ mA to 0.1 $I_R$ |

\* JEDEC Equivalent: 1N6263

# SOLID STATE TUNER COMPONENTS

## Variable-Capacitance Tuner Diodes (delivered in matched sets)

| Type      | Package        | Capacitance |         | Capacitance Ratio |      |      |                   | Series Resistance |               |         | Reverse Current |         |            |
|-----------|----------------|-------------|---------|-------------------|------|------|-------------------|-------------------|---------------|---------|-----------------|---------|------------|
|           |                | min. pF     | max. pF | at $V_R$ V        | min. | max. | at $V_R =$ V to V | $\Omega$ typ.     | $\Omega$ max. | at fMHz | and CpF         | max. nA | at $V_R$ V |
| BB221     | DO-35          | 1.8         | 2.2     | 28                | 8.0  | 9.5  | 1 to 28           | 0.55              | 0.7           | 470     | 9               | 30      | 30         |
| BB222     | DO-35          | 1.8         | 2.5     | 28                | 7.3  | 9.5  | 1 to 28           | 0.80              | 1.0           | 470     | 9               | 30      | 30         |
| BB329     | DO-35          | 2.5         | 3.2     | 28                | 12   | -    | 1 to 28           | 0.85              | -             | 330     | 25              | 30      | 30         |
| BB404A*** | TO-236         | 42          | 43.5    | 2                 | 1.65 | 1.75 | 2 to 8            | -                 | 0.4           | 100     | 38              | 20      | 10         |
| BB404B    | TO-236         | 43          | 44.5    | 2                 | 1.65 | 1.75 | 2 to 8            | -                 | 0.4           | 100     | 38              | 20      | 10         |
| BB404C    | TO-236         | 44          | 45.5    | 2                 | 1.65 | 1.75 | 2 to 8            | -                 | 0.4           | 100     | 38              | 20      | 10         |
| BB404D    | TO-236         | 45          | 46.5    | 2                 | 1.65 | 1.75 | 2 to 8            | -                 | 0.4           | 100     | 38              | 20      | 10         |
| BB404E    | TO-236         | 46          | 47.5    | 2                 | 1.65 | 1.75 | 2 to 8            | -                 | 0.4           | 100     | 38              | 20      | 10         |
| BB510     | TO-236**       | 440         | 600     | 1                 | 15   | -    | 1 to 9            | -                 | -             | -       | -               | 30      | 10         |
| BB521*    | DO-35          | 1.8         | 2.2     | 28                | 8.0  | 9.5  | 1 to 28           | 0.55              | 0.7           | 470     | 9               | 30      | 30         |
| BB523     | DO-35          | 1.9         | 2.25    | 28                | 9.5  | 15   | 1 to 28           | -                 | 0.8           | 470     | 14              | 30      | 30         |
| BB529*    | DO-35          | 2.5         | 3.2     | 28                | 12   | -    | 1 to 28           | 0.85              | -             | 330     | 25              | 30      | 30         |
| BB531     | DO-35          | 3.15        | 3.55    | 28                | 19.5 | 25   | 1 to 28           | 0.9               | 1.0           | 300     | 25              | 30      | 30         |
| BB601     | $\approx$ 60A2 | 0.9         | 1.2     | 28                | 8.0  | 9    | 1 to 28           | -                 | 1.2           | 470     | 9               | 30      | 30         |
| BB621*    | MiniMELF       | 1.8         | 2.2     | 28                | 8.0  | 9.5  | 1 to 28           | 0.55              | 0.7           | 470     | 9               | 30      | 30         |
| BB622     | MiniMELF       | 1.8         | 2.5     | 28                | 7.3  | 9.5  | 1 to 28           | 0.80              | 1.0           | 470     | 9               | 30      | 30         |
| BB623     | MiniMELF       | 1.9         | 2.25    | 28                | 9.5  | 15   | 1 to 28           | -                 | 0.8           | 470     | 14              | 30      | 30         |
| BB629*    | MiniMELF       | 2.5         | 3.2     | 28                | 12   | -    | 1 to 28           | 0.85              | -             | 330     | 25              | 30      | 30         |
| BB631     | MiniMELF       | 3.15        | 3.55    | 28                | 19.5 | 25   | 1 to 28           | 0.9               | 1.0           | 300     | 25              | 30      | 30         |
| BB721     | $\approx$ 60A2 | 2.0         | 2.29    | 28                | 8.0  | -    | 1 to 28           | -                 | 0.5           | 470     | 14              | 30      | 30         |
| BB723     | $\approx$ 60A2 | 1.9         | 2.25    | 28                | 9.5  | 15   | 1 to 28           | -                 | 0.8           | 470     | 14              | 30      | 30         |
| BB729     | $\approx$ 60A2 | 2.38        | 2.93    | 28                | 12   | -    | 1 to 28           | -                 | 0.8           | 470     | 25              | 30      | 30         |
| BB730     | $\approx$ 60A2 | 2.7         | 2.9     | 28                | 14.8 | 16.8 | 1 to 28           | -                 | 0.9           | 330     | 25              | 30      | 28         |
| BB731     | $\approx$ 60A2 | 3.15        | 3.55    | 28                | 19.5 | 25   | 1 to 28           | 0.9               | 1.0           | 300     | 25              | 30      | 30         |

\* These types are successors of types BB221 and BB329 respectively, providing an improved linearity of the capacitance versus reverse bias curve.

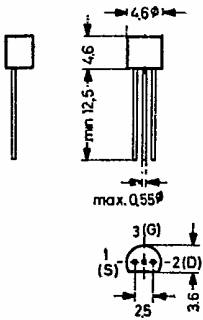
\*\* Pins 1 and 2: Cathode, Pin 3: Anode

\*\*\* The types BB404 are dual capacitance diodes with common cathode. Pin 1: Cathode, Pin 2: Anode 1, Pin 3: Anode 2.

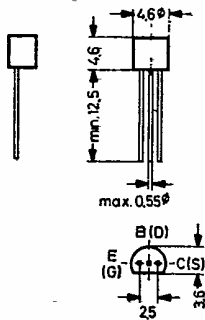
# PACKAGE OUTLINES

## All Dimensions in mm

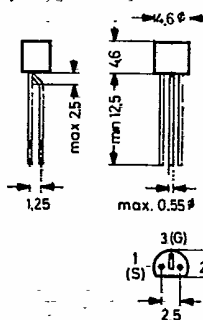
**TO-92 Plastic Package (10D3)**  
Pin in-Line "A"  
Weight approx. 0.18 g



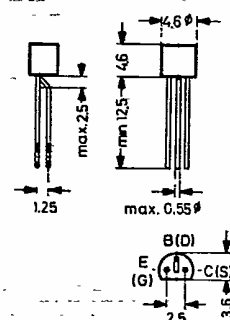
**TO-92 Plastic Package (10D3)**  
Pins in-Line "B"  
Weight approx. 0.18 g



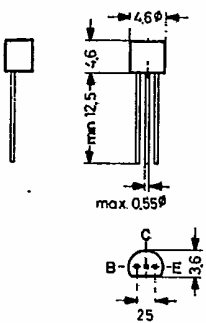
**TO-92 Plastic Package**  
Pins TO-18 "A"  
Weight approx. 0.18 g



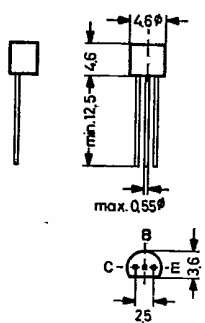
**TO-92 Plastic Package**  
Pins TO-18 "B"  
Weight approx. 0.18 g



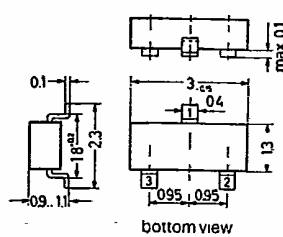
**TO-92 Plastic Package**  
Pins in-Line "D"  
Weight approx. 0.18 g



**TO-92 Plastic Package**  
Pins in-Line "E"  
Weight approx. 0.18 g



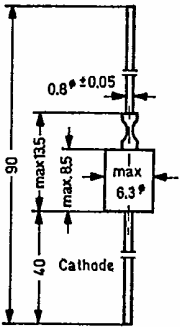
**TO-236 Plastic Package (23A3)**  
Weight approx. 0.01 g



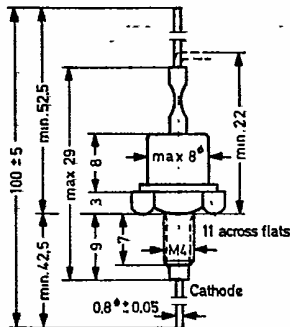
# PACKAGE OUTLINES

All Dimensions in mm

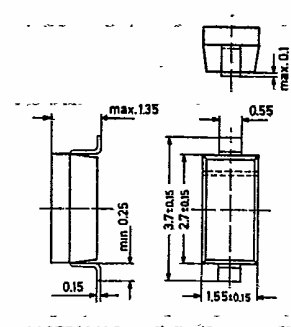
**DO-13 Metal Case**  
Weight approx. 1.4 g



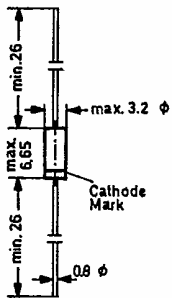
**Stud-Mounted Metal Case**  
Weight approx. 6 g



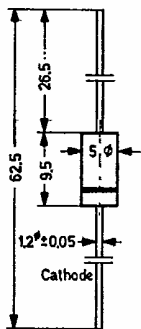
**60A2 Diode Plastic Package**  
Weight approx. 0.013 g



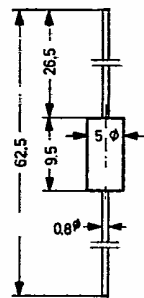
**Diode Plastic Package P1**  
Weight approx. 0.4 g



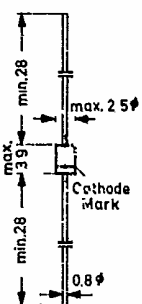
**Diode Plastic Package P2**  
Weight approx. 1 g



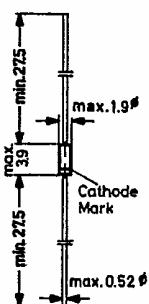
**Diode Plastic Package P3**  
Weight approx. 0.6 g



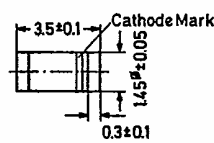
**DO-41 Glass Case**  
Weight approx. 0.35 g



**DO-35 Glass Case**  
Weight approx. 0.13 g



**MiniMELF Glass Case**  
Weight approx. 0.05 g



**MELF Glass Case**  
Weight approx. 0.25 g

