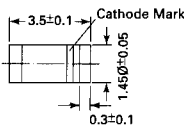


Tuner Diodes

Silicon Epitaxial Planar Capacitance Diodes in MiniMelf case especially suited for automatic insertion with very wide effective capacitance variation for tuning the whole VHF range in TV receivers, also suited for CTV.

These diodes are delivered matched according to the tracking condition described below.

The diodes are delivered taped.
Details see "Taping".

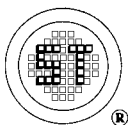


Glass case MiniMELF

Weight approx. 0.05g
Dimensions in mm

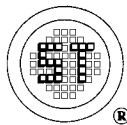
Absolute Maximum Ratings (T_a = 25 °C)

| | Symbol | Value | Unit |
|---------------------------|----------------|--------------|------|
| Reverse Voltage | V _R | 32 | V |
| Junction Temperature | T _J | 125 | °C |
| Storage Temperature Range | T _S | -55 to + 150 | °C |

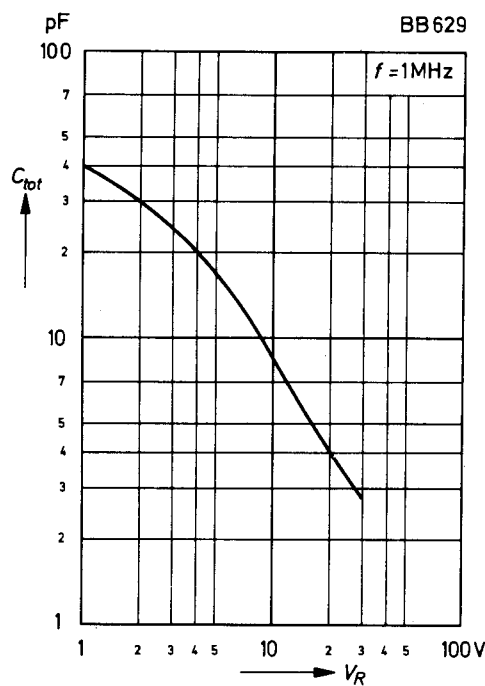


Characteristics at T_{amb} =25 °C

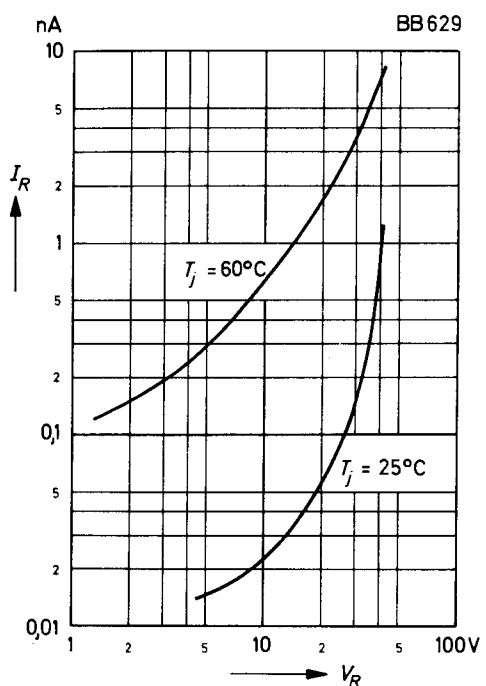
| | Symbol | Min. | Typ. | Max. | Unit |
|---|------------------------------------|------|------|------|------|
| Capacitance at f = 1 MHz | | | | | |
| at V _R = 1 V | C _{tot} | - | 35 | - | pF |
| at V _R = 28 V | C _{tot} | 2.5 | - | 3.2 | pF |
| Effective Capacitance Ratio | | | | | |
| at V _R = 1 to 28 V | $\frac{C_{tot}(1V)}{C_{tot}(28V)}$ | 12 | - | - | - |
| Series Resistance (at f = 330 MHz, C _{tot} = 25 pF) | r _s | - | 0.85 | - | Ω |
| Q-Factor | | | | | |
| at f = 50 MHz, V _R = 3 V | Q | - | 180 | - | - |
| at f = 300 MHz, C _{tot} = 25 V | Q | - | 250 | - | - |
| Cutoff Frequency for Q = 1 at V _R = 3 V | f _{Q1} | - | 9 | - | GHz |
| Series Resonance Frequency at V _R = 25 V | f ₀ | - | 2 | - | GHz |
| Series Inductance | L _s | - | 2 | - | nH |
| Leakage Current at V _R = 30 V | I _R | - | - | 30 | nA |
| Reverse Breakdown Voltage | V _{(BR)R} | 32 | - | - | V |
| at I _R = 10 μA | | | | | |
| For any two diodes of a matched group the following tracking condition applies: In the reverse bias voltage range of V _R = 0.5 V to V _R = 28 V the maximum capacitance deviation is 2.5 %. | | | | | |



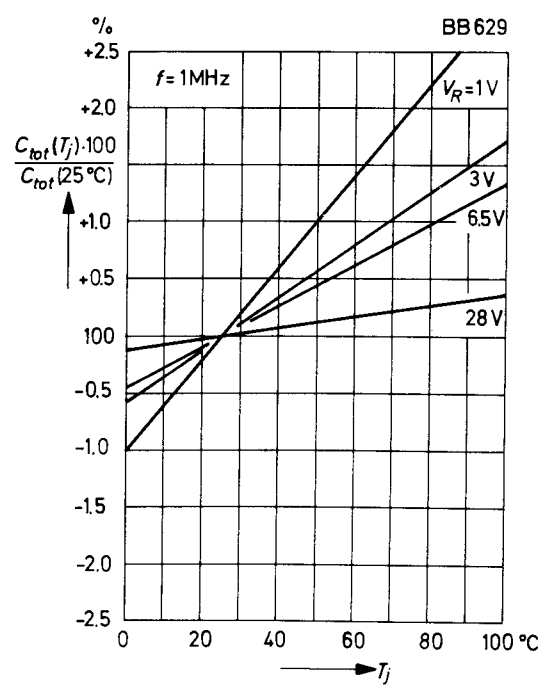
Capacitance
versus reverse voltage



Leakage current
versus reverse voltage



Relative capacitance
versus junction temperature



Q-Factor
versus frequency

