

Silicon Variable Capacitance Diode

Description

The 1T363 is a variable capacitance diode designed for electronic tuning of CATV tuner, and super miniature package allows the tuner miniaturization.

Features

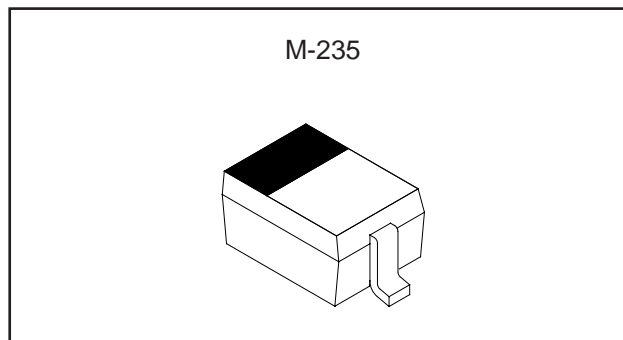
- Super miniature package
- Low series resistance 0.80 Ω Max. (f=470 MHz)
- Large capacitance ratio 15 Typ. (C₁/C₂₈)
- Small leakage current 10 nA Max. (V_R=28 V)
- Maximum capacitance deviation
3 % Max.

Applications

Electronic tuning for TV, CATV

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings (T_a=25 °C)

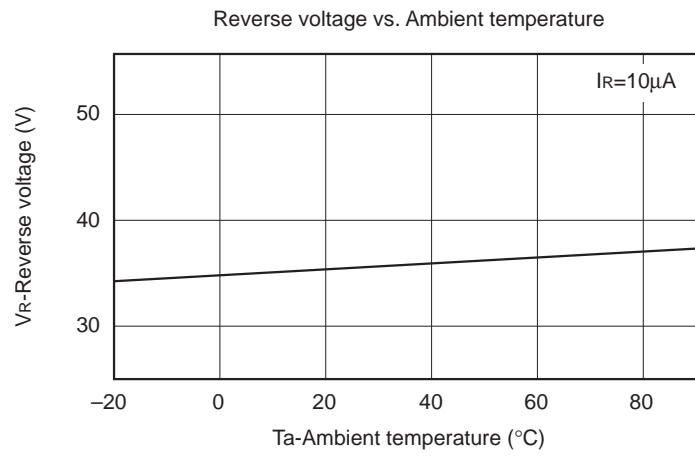
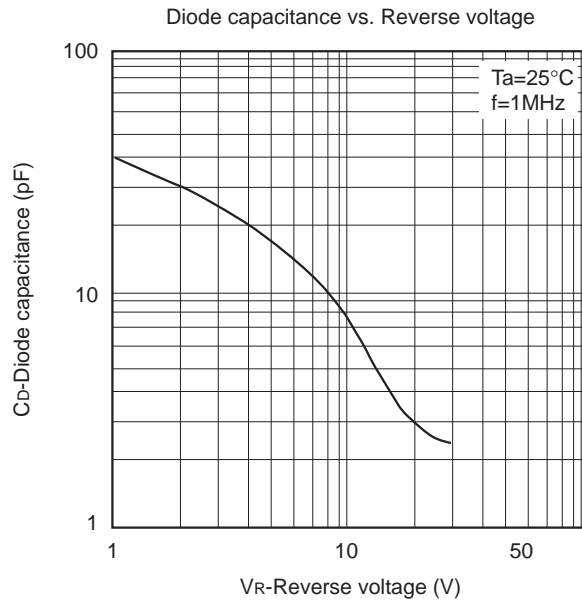
- Reverse voltage V_R 30 V
- Peak reverse voltage V_{RM} 35 V
(R_L≥10 kΩ)
- Operating temperature Topr 85 °C
- Storage temperature Tstg -55 to +150 °C

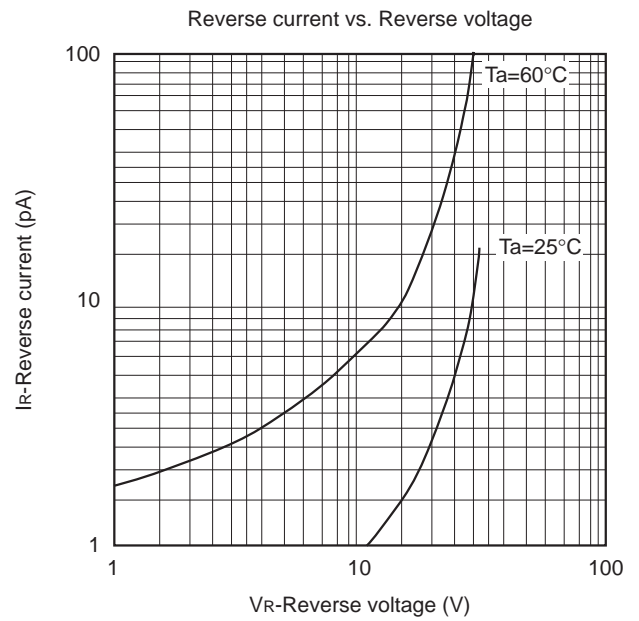
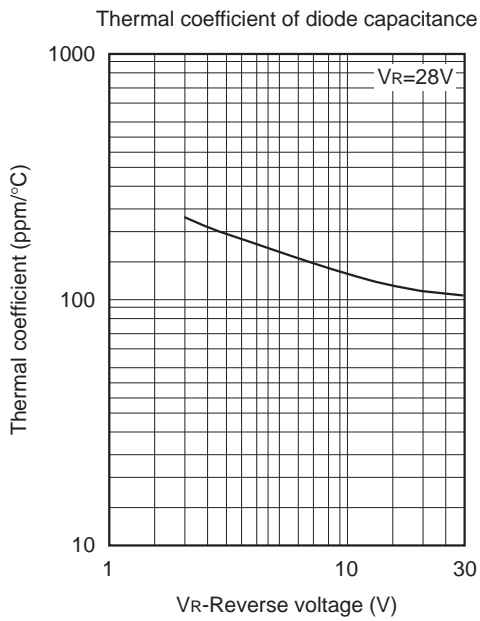
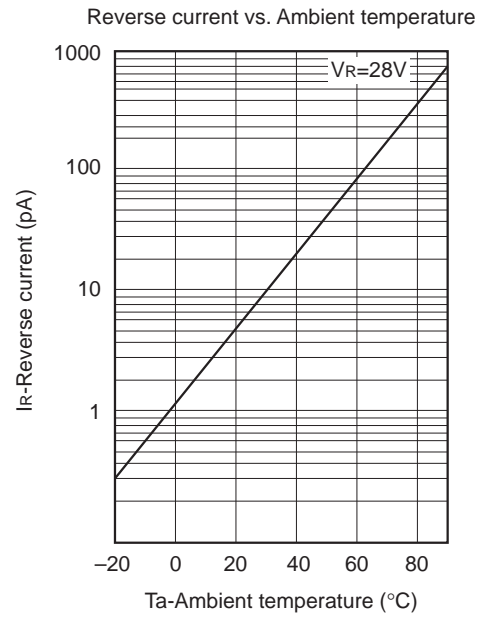
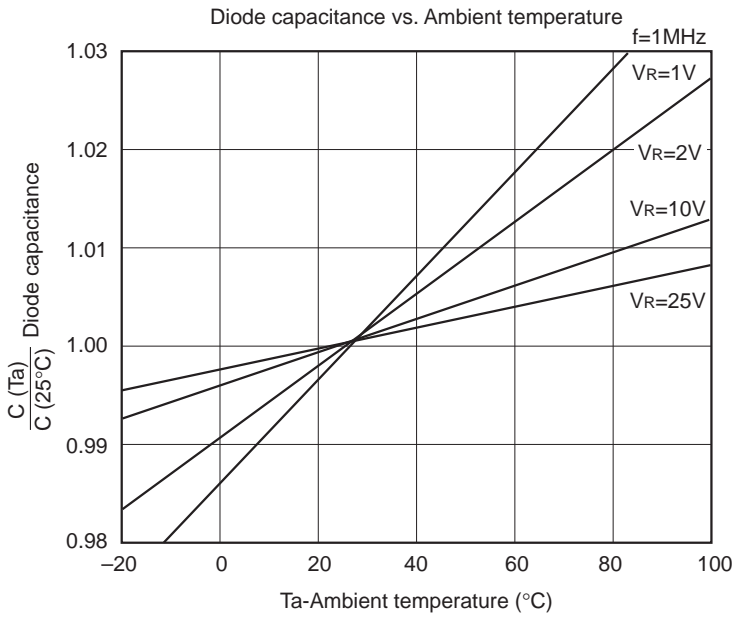
Electrical Characteristics

(T_a=25 °C)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---------------------------------|------------------------------------|-------|-------|-------|------|
| Reverse current | I _R | V _R =28 V | | | 10 | nA |
| Diode capacitance | C ₁ | V _R =1 V, f=1 MHz | 34.65 | 38.00 | 42.35 | pF |
| | C ₂₈ | V _R =28 V, f=1 MHz | 2.361 | 2.515 | 2.754 | pF |
| Capacitance ratio | C ₁ /C ₂₈ | f=1 MHz | 13.5 | 15.0 | | |
| Series resistance | r _s | C _D =14 pF, f=470 MHz | | 0.75 | 0.80 | Ω |
| Maximum-capacitance deviation in the same ranking | ΔC | V _R =1 to 28 V, f=1 MHz | | | 3 | % |

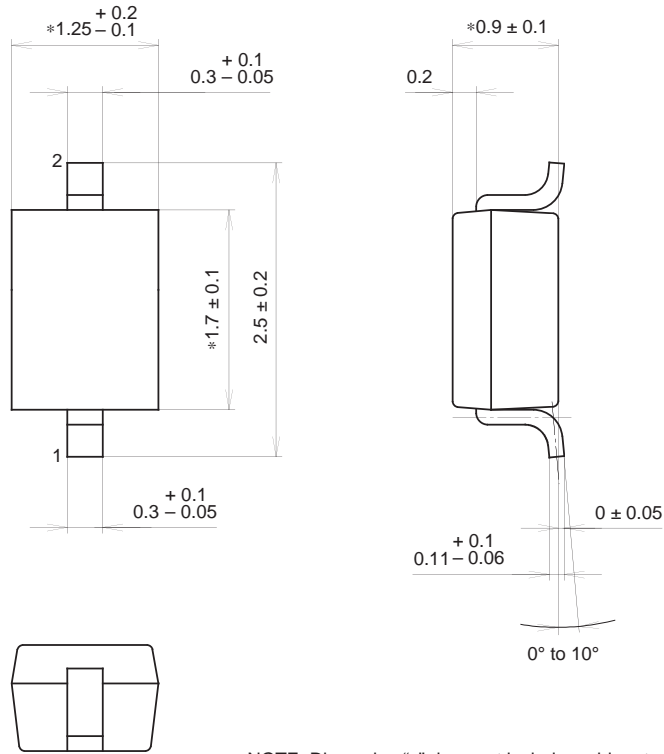
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Package Outline Unit : mm

M-235

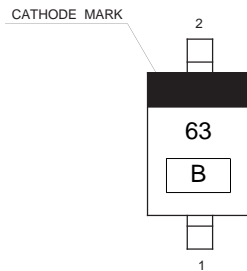


NOTE: Dimension "*" does not include mold protrusion.

| | |
|------------|-------|
| SONY CODE | M-235 |
| EIAJ CODE | _____ |
| JEDEC CODE | _____ |

| | |
|----------------|------|
| PACKAGE WEIGHT | 0.1g |
|----------------|------|

Marking



Notes

- 1) B: Lot No. (Year and Month of manufacture)
 Year; Last one digit
 Month; A, B, C (for Oct. to Dec.)
 1 to 9 (for Jan. to Sept.)