

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

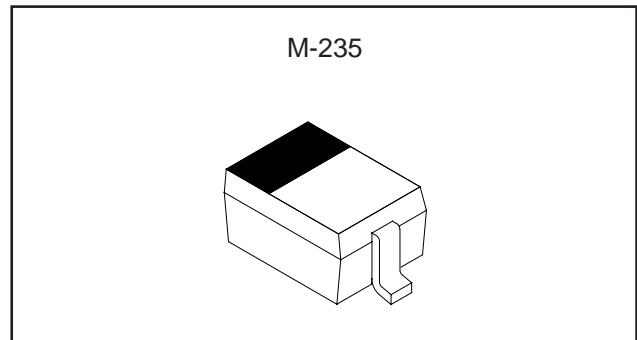
- Super miniature package
- Low series resistance 0.80 Ω Max. (f=470 MHz)
- Large capacitance ratio 15 Typ. (C₁/C₂₈)
- Small leakage current 10 nA Max. (V_R=28 V)
- Maximum capacitance deviation
3 % Max.

Applications

Electronic tuning for TV, CATV

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings (T_a=25 °C)

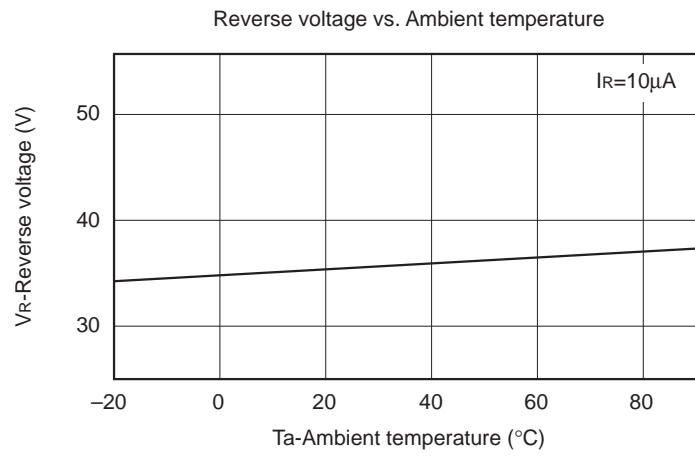
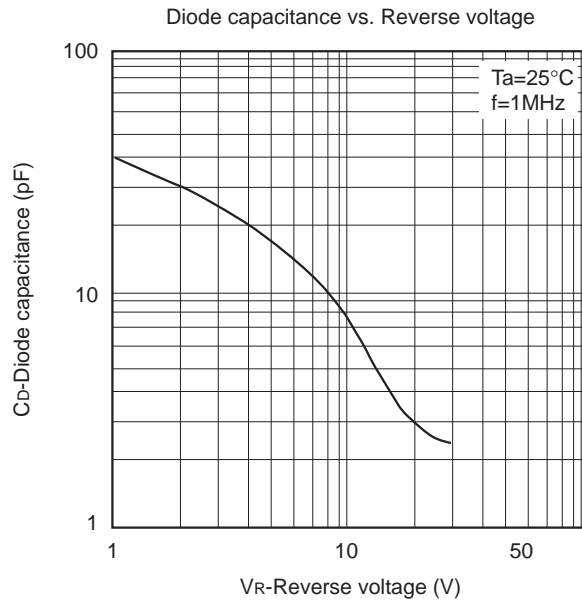
- Reverse voltage V_R 30 V
- Peak reverse voltage V_{RM} 35 V
(R_L≥10 kΩ)
- Operating temperature T_{opr} 85 °C
- Storage temperature T_{stg} -55 to +150 °C

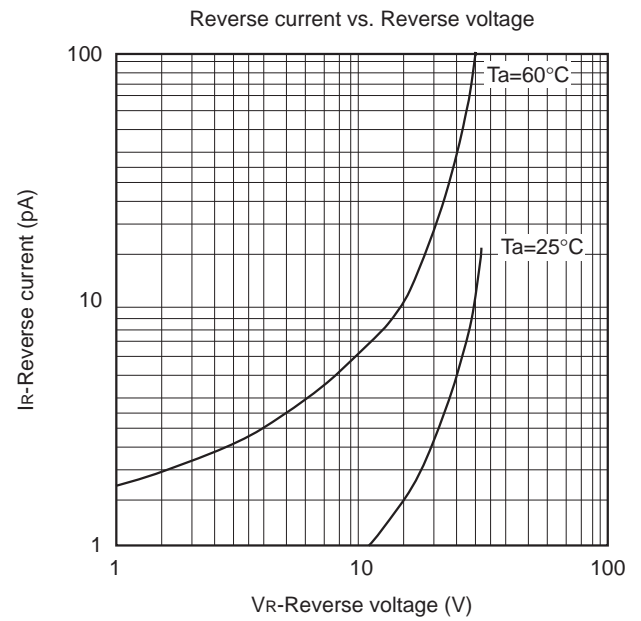
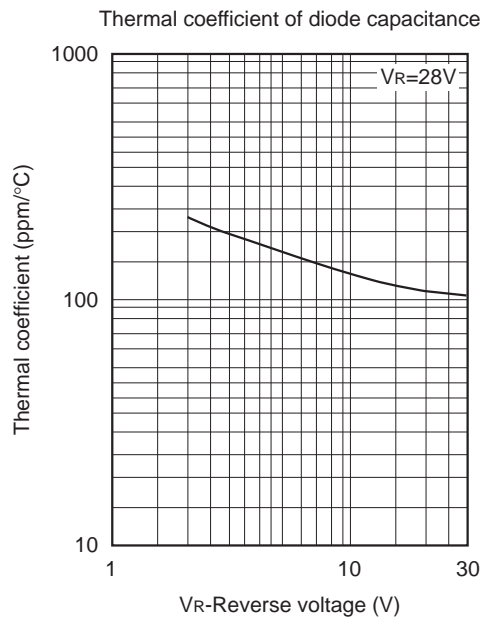
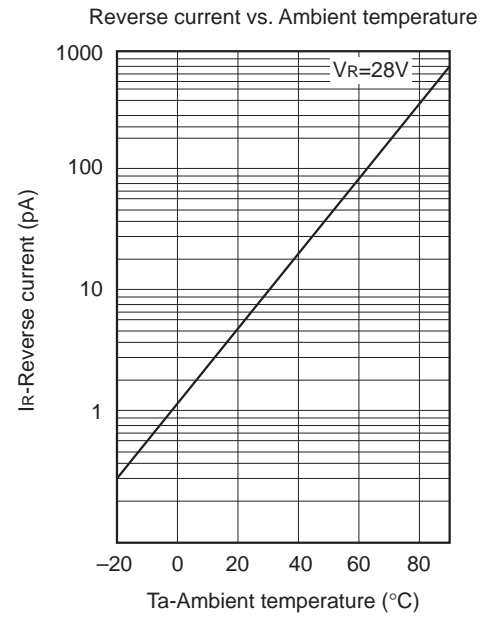
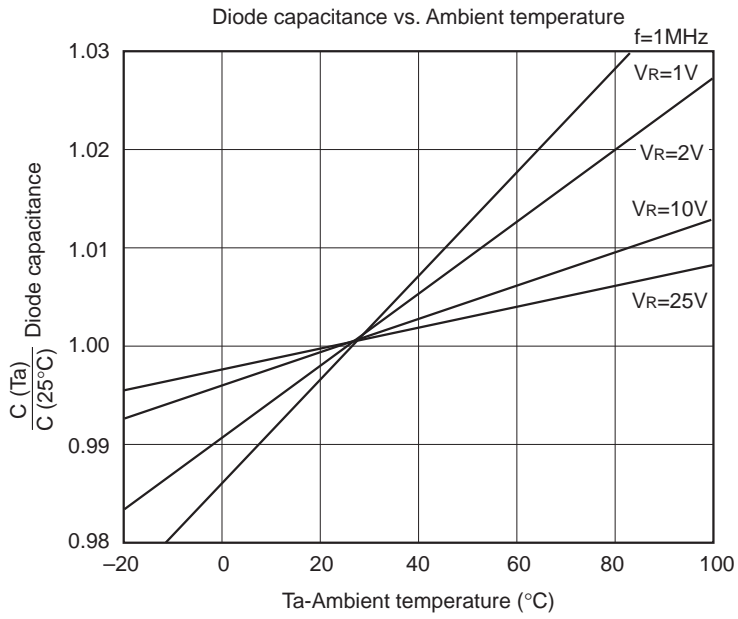
Electrical Characteristics

(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	%

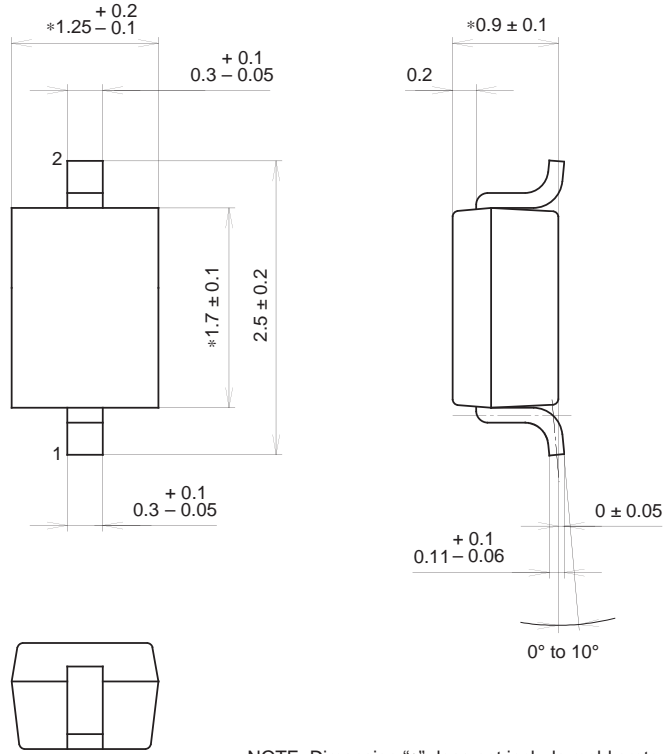
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Package Outline Unit : mm

M-235

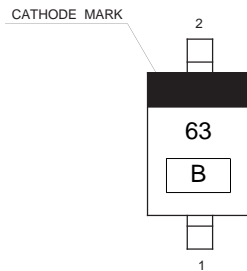


NOTE: Dimension "*" does not include mold protrusion.

SONY CODE	M-235
EIAJ CODE	_____
JEDEC CODE	_____

PACKAGE WEIGHT	0.1g
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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.)