

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

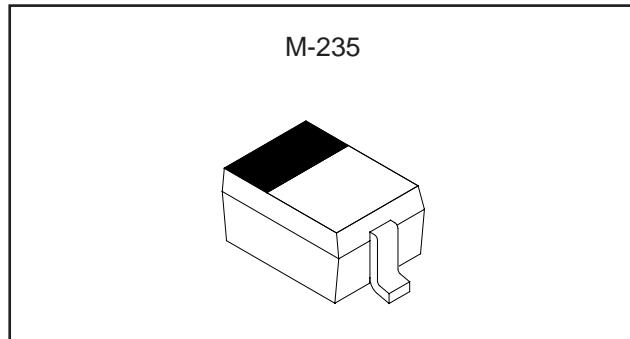
- Super miniature package
- Low series resistance 0.80 Ω Max. ($f=470$ MHz)
- Large capacitance ratio 15 Typ. (C_1/C_{28})
- Small leakage current 10 nA Max. ($V_R=28$ V)
- Maximum capacitance deviation 3 % Max.

Applications

Electronic tuning for TV, CATV

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings ($T_a=25$ °C)

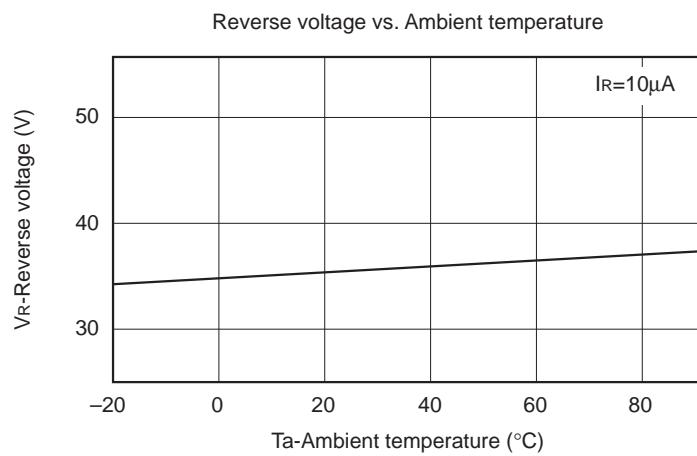
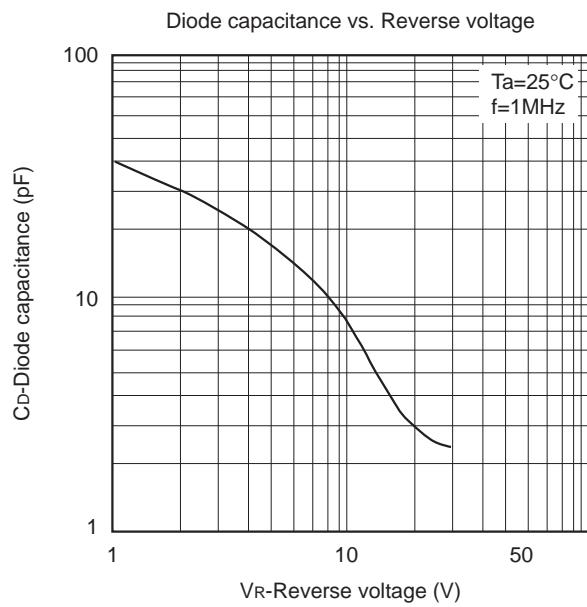
• Reverse voltage	V_R	30	V
• Peak reverse voltage	V_{RM}	35	V
		$(R_L \geq 10$ k Ω)	
• Operating temperature	T_{opr}	85	°C
• Storage temperature	T_{stg}	-55 to +150	°C

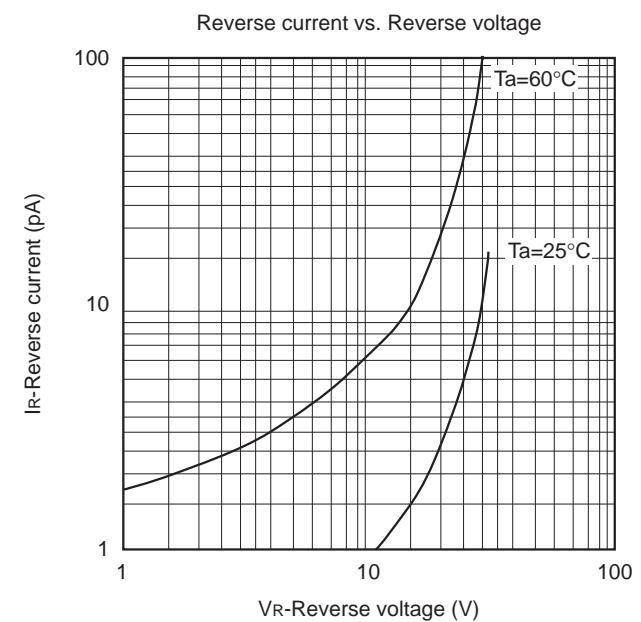
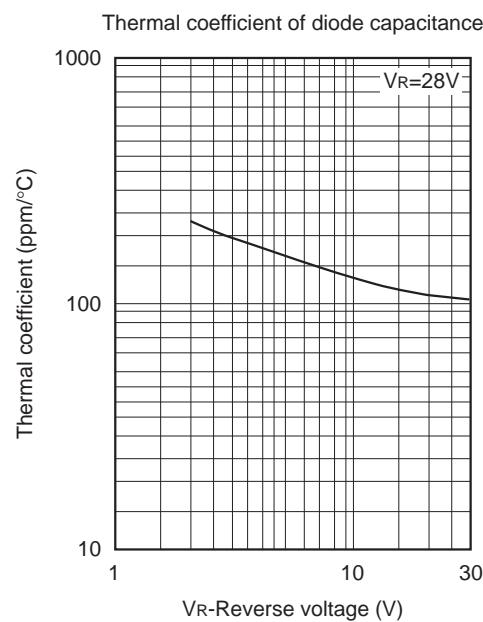
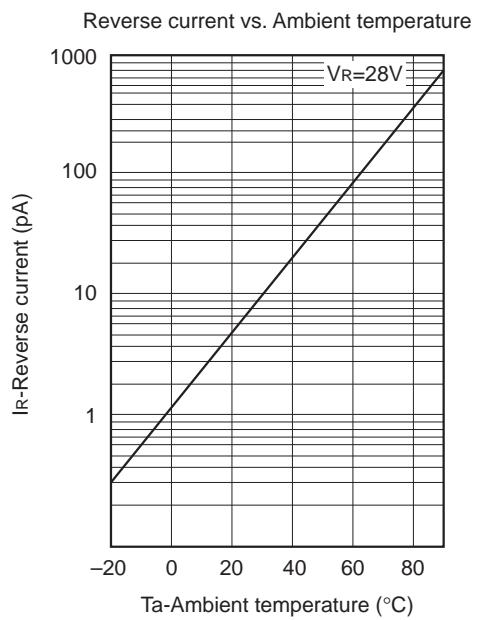
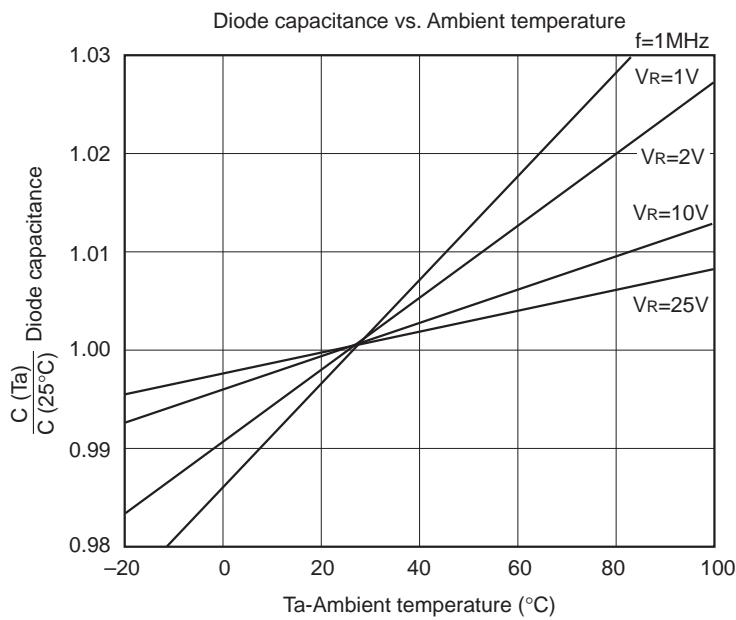
Electrical Characteristics

($T_a=25$ °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	%

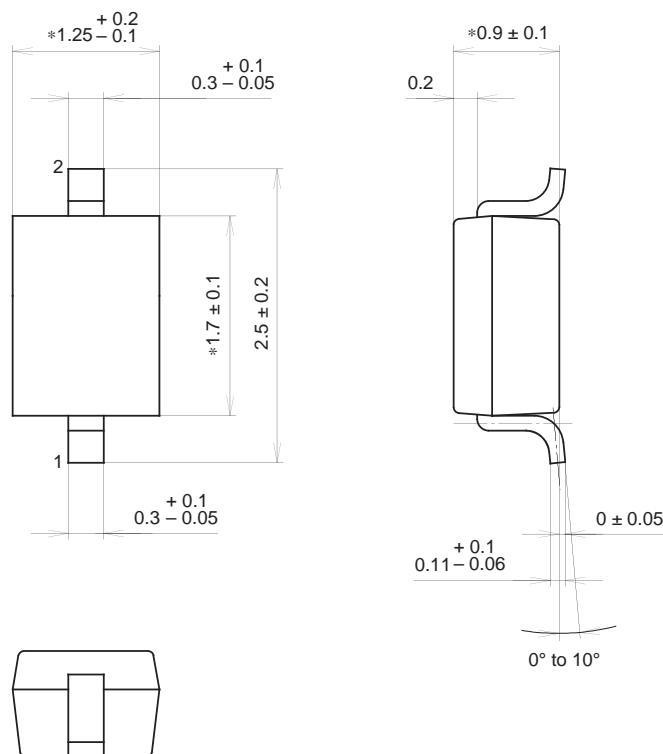
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Package Outline Unit : mm

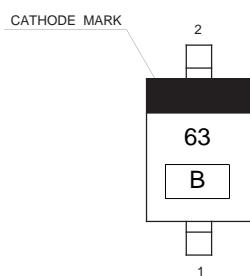
M-235



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.)