

Variable Capacitance Diode

Description

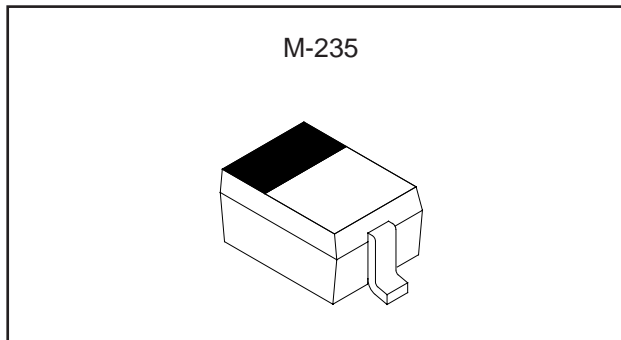
The 1T411 is a variable capacitance diode designed for analog cellular phone and it has a super miniature package.

Features

- Super miniature package
- Small series resistance 0.40 Ω Max. (f=470 MHz)
- Large capacitance ratio 6.5 Typ. (C₂/C₂₅)
- Capacitance deviation in a matching group 3 % (max.)

Structure

Silicon epitaxial planar-type diode



Absolute Maximum Ratings (T_a=25 °C)

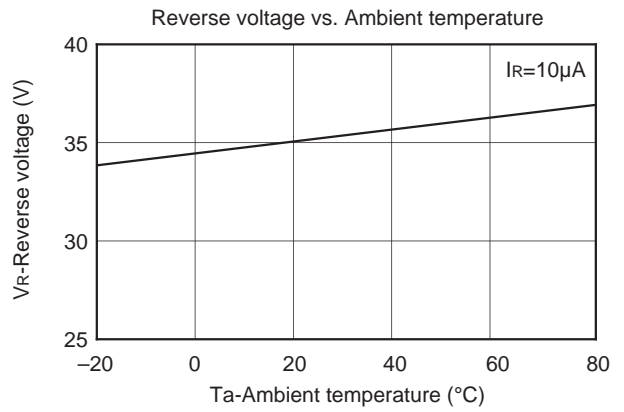
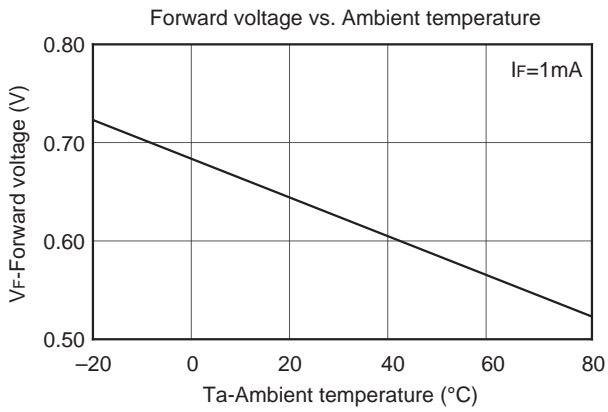
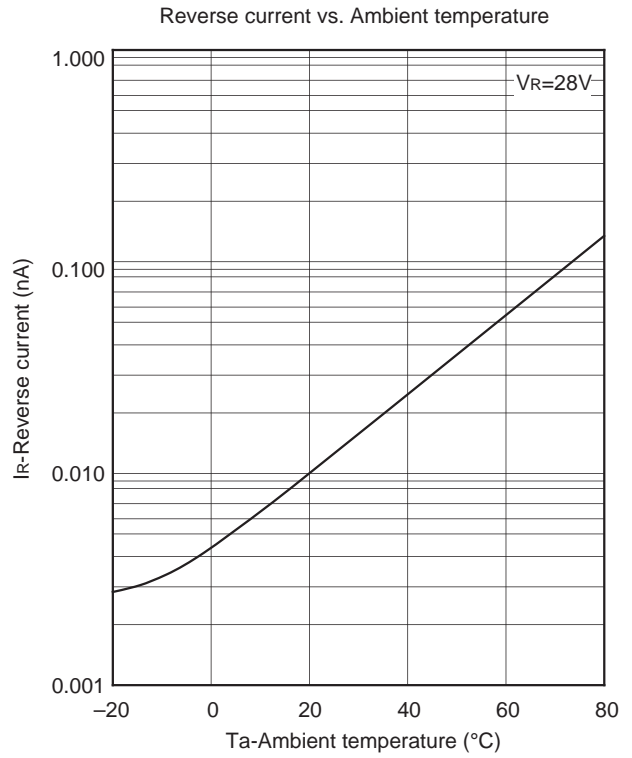
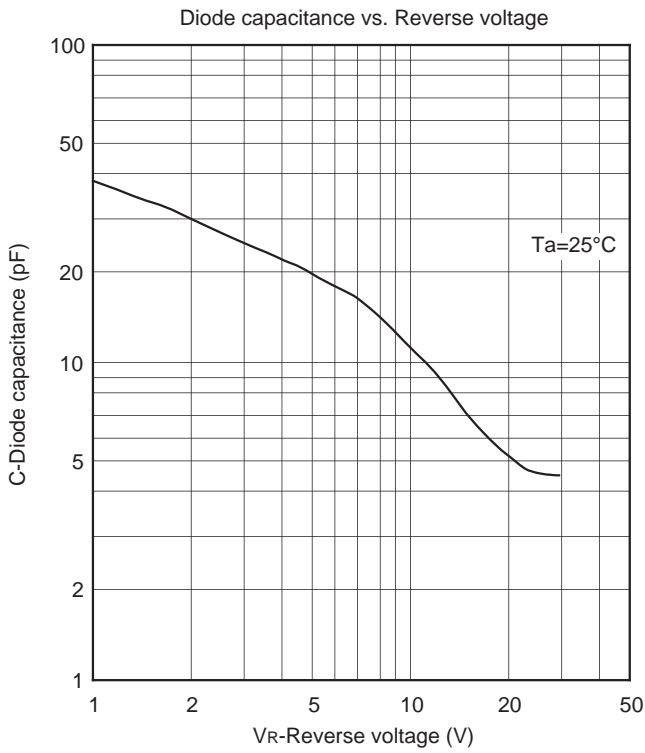
- Reverse voltage V_R 30 V
- Peak reverse voltage V_{RM} 35 V (R_L≥10 kΩ)
- Operating temperature Topr -20 to +75 °C
- Storage temperature Tstg -65 to +150 °C

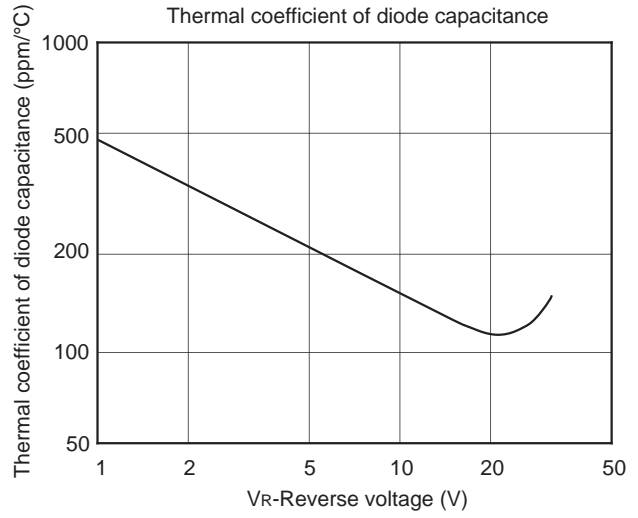
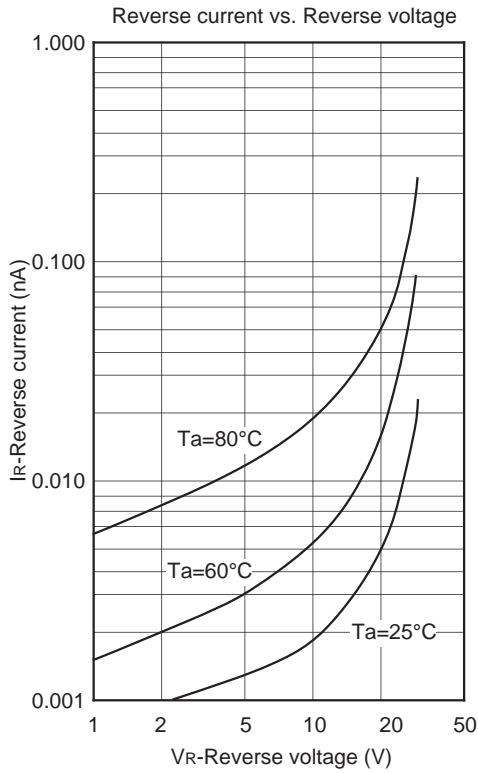
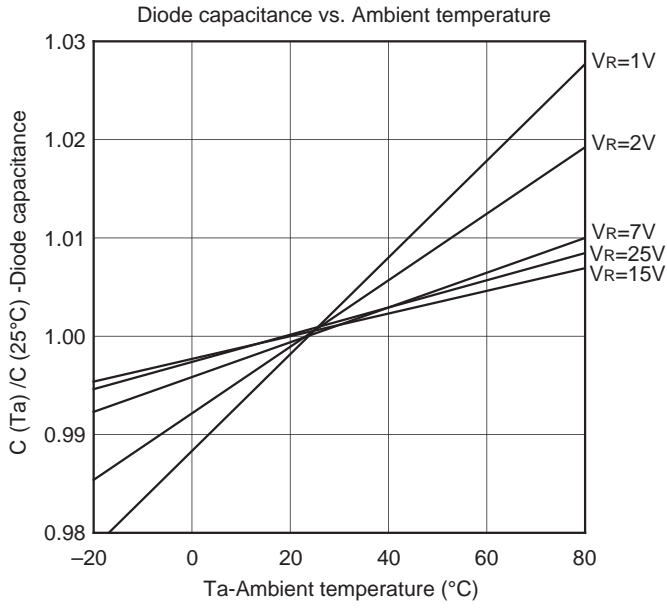
Electrical Characteristics

(T_a=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I _R	V _R =28 V			20	nA
Diode capacitance	C ₂	V _R =2 V, f=1 MHz	26.37	29.50	33.05	pF
	C ₂₅	V _R =25 V, f=1 MHz	4.030	4.400	4.807	pF
Capacitance ratio	C ₂ /C ₂₅	f=1 MHz		6.5		
Series resistance	r _S	C _D =14 pF, f=470 MHz		0.35	0.40	Ω
Capacitance deviation in a matching group	ΔC	V _R =2 to 25 V, f=1 MHz			3	%

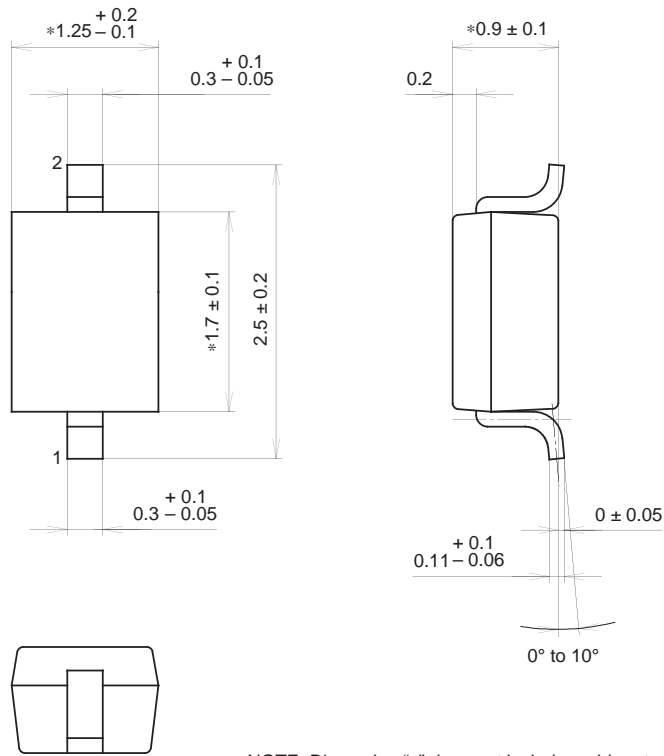
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Package Outline Unit : mm

M-235

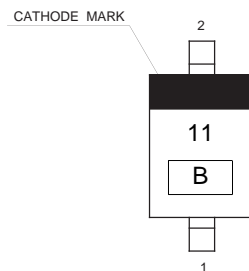


NOTE: Dimension "*" does not include mold protrusion.

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.)