

Variable Capacitance Diode

Description

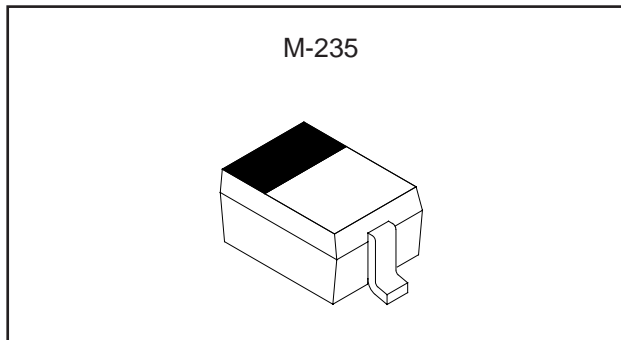
The 1T411 is a variable capacitance diode designed for analog cellular phone and it has a super miniature package.

Features

- Super miniature package
- Small series resistance 0.40 Ω Max. (f=470 MHz)
- Large capacitance ratio 6.5 Typ. (C<sub>2</sub>/C<sub>25</sub>)
- Capacitance deviation in a matching group 3 % (max.)

Structure

Silicon epitaxial planar-type diode



Absolute Maximum Ratings (T<sub>a</sub>=25 °C)

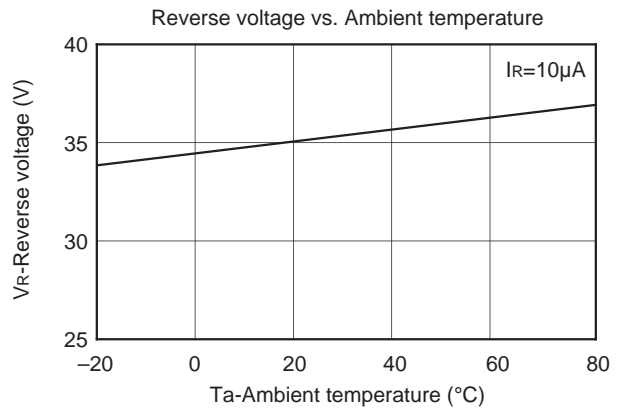
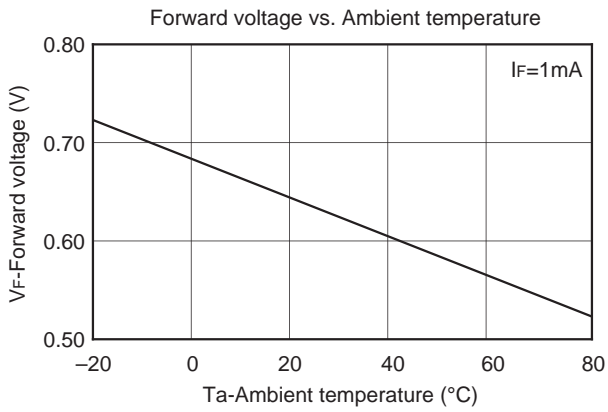
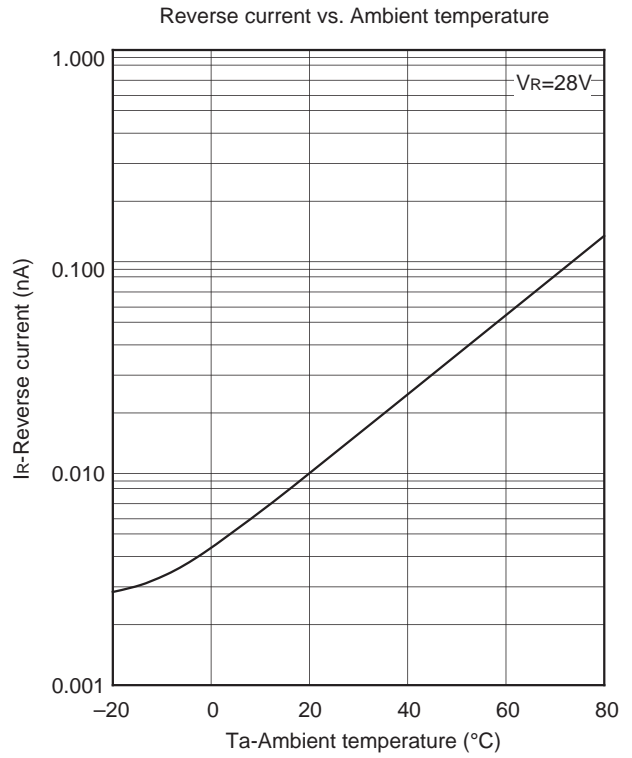
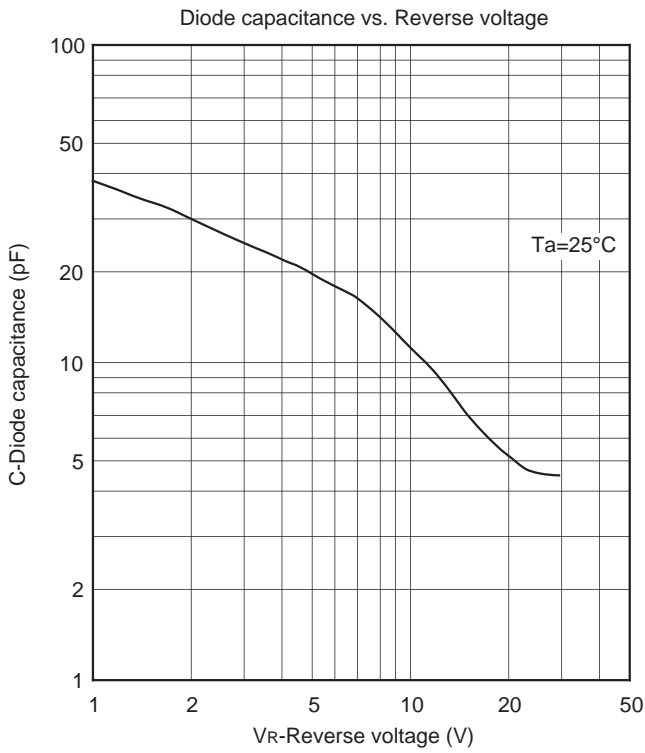
- Reverse voltage V<sub>R</sub> 30 V
- Peak reverse voltage V<sub>RM</sub> 35 V (R<sub>L</sub>≥10 kΩ)
- Operating temperature Topr -20 to +75 °C
- Storage temperature Tstg -65 to +150 °C

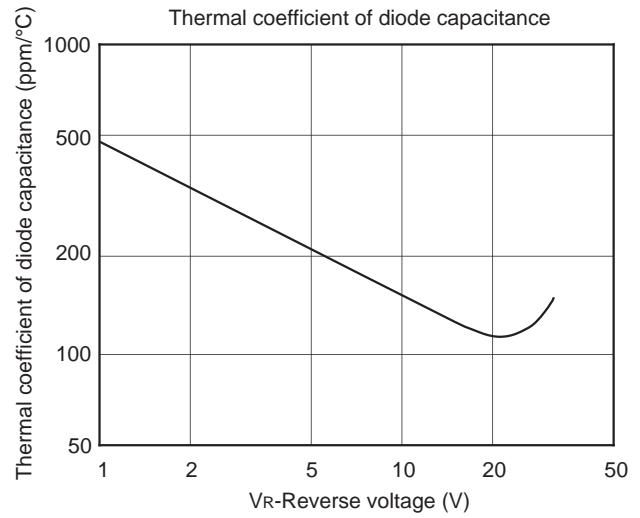
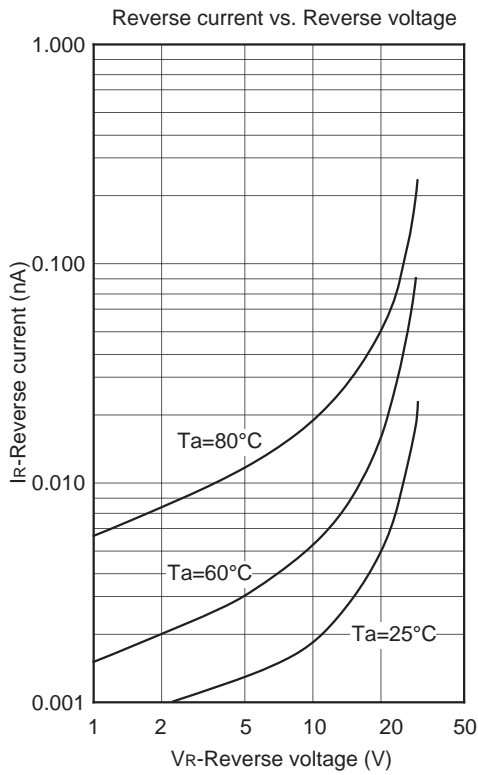
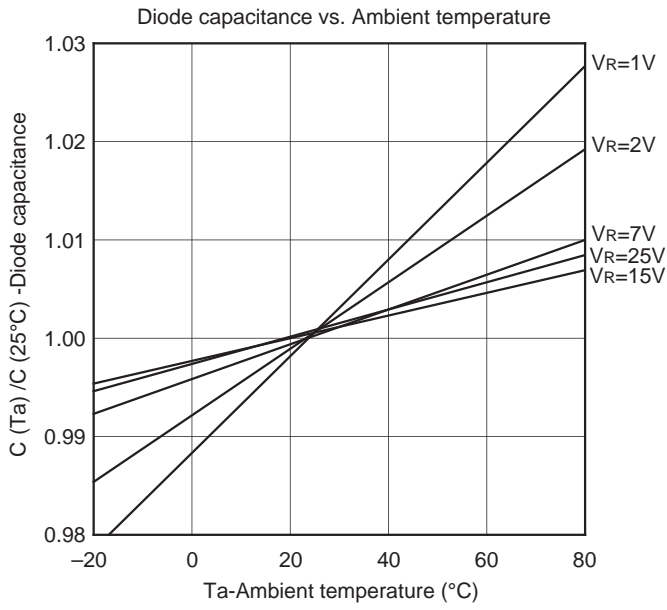
Electrical Characteristics

(T<sub>a</sub>=25 °C)

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

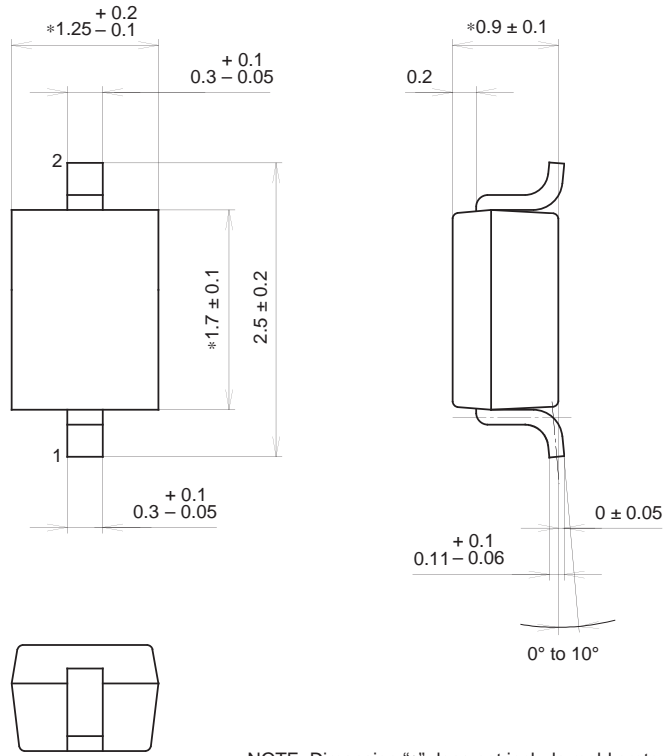
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Package Outline Unit : mm

M-235

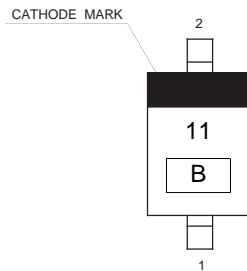


NOTE: Dimension "\*" does not include mold protrusion.

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.)