

UHF band VCO

**Description**

The 1T367 is a variable capacitance diode housed in super miniature package, designed for UHF band VCO.

**Features**

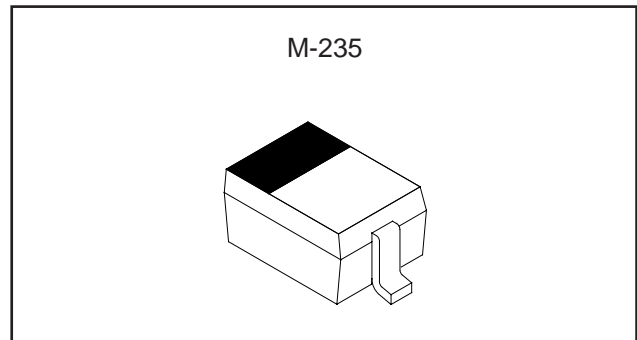
- Super miniature package
- Small series resistance  
rs=0.3 Ω (Typ.)

**Applications**

- UHF band VCO
- Local oscillator for telephone
- Local oscillator for cellular systems

**Structure**

Silicon epitaxial planar type diode



**Absolute Maximum Ratings** (Ta=25 °C)

- Reverse voltage  $V_R$  15 V
- Operating temperature  $T_{opr}$  -35 to +85 °C
- Storage temperature  $T_{stg}$  -65 to +150 °C

**Electrical Characteristics**

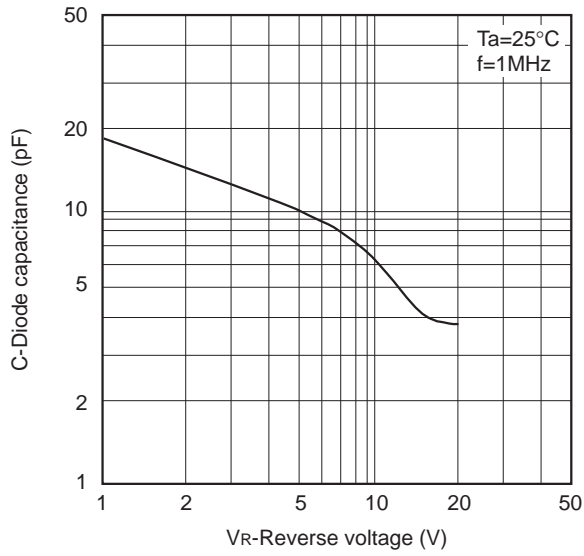
(Ta=25 °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	$I_R$	$V_R=15\text{ V}$			3	nA
Diode capacitance	$C_2$	$V_R=2\text{ V}, f=1\text{ MHz}$	14.3	15.0	16.0	pF
	$C_{10}$	$V_R=10\text{ V}, f=1\text{ MHz}$	5.5	6.0	6.5	pF
Capacitance ratio	$C_2/C_{10}$		2.2	2.5		
Series resistance	rs	$V_R=5\text{ V}, f=470\text{ MHz}$		0.3	0.4	Ω

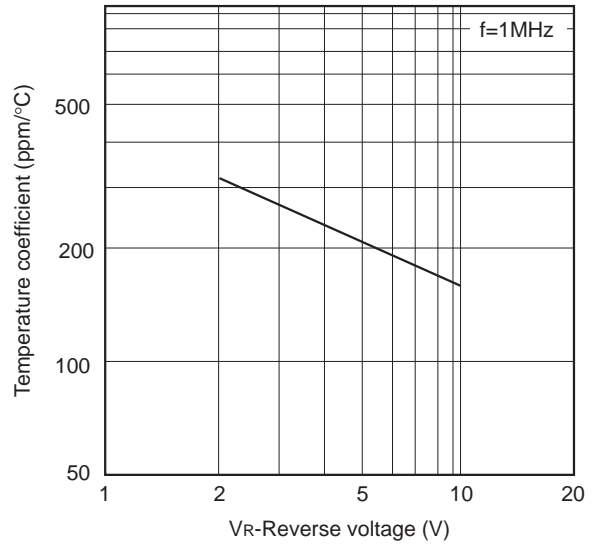
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Example of Representative Characteristics

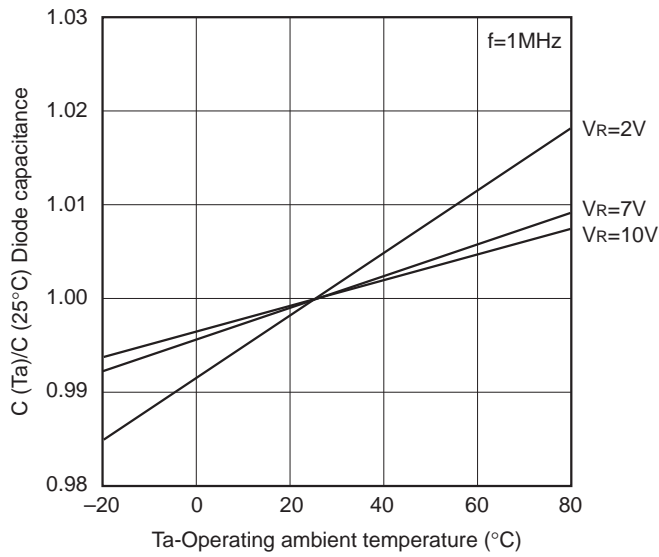
Diode capacitance vs. Reverse voltage

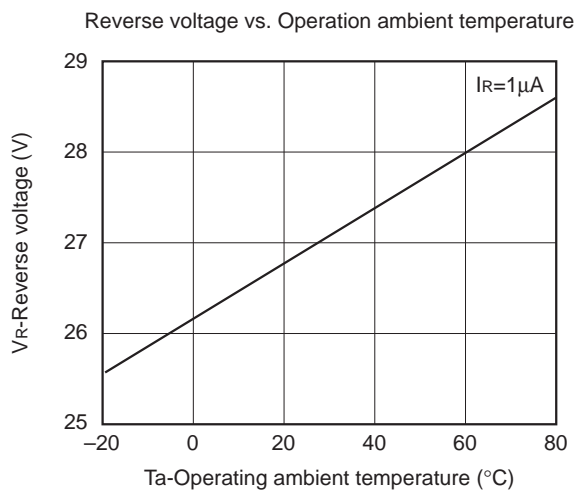
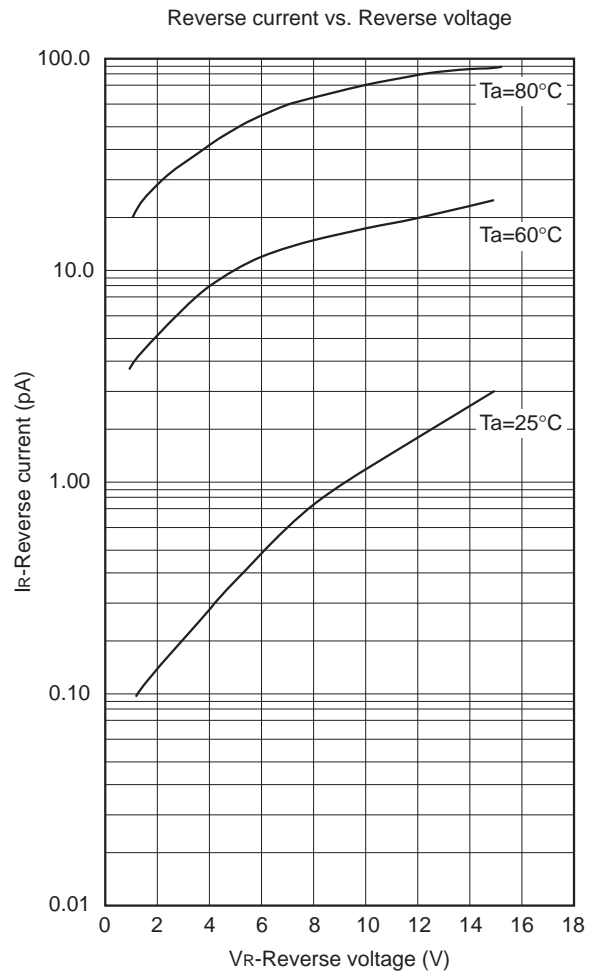
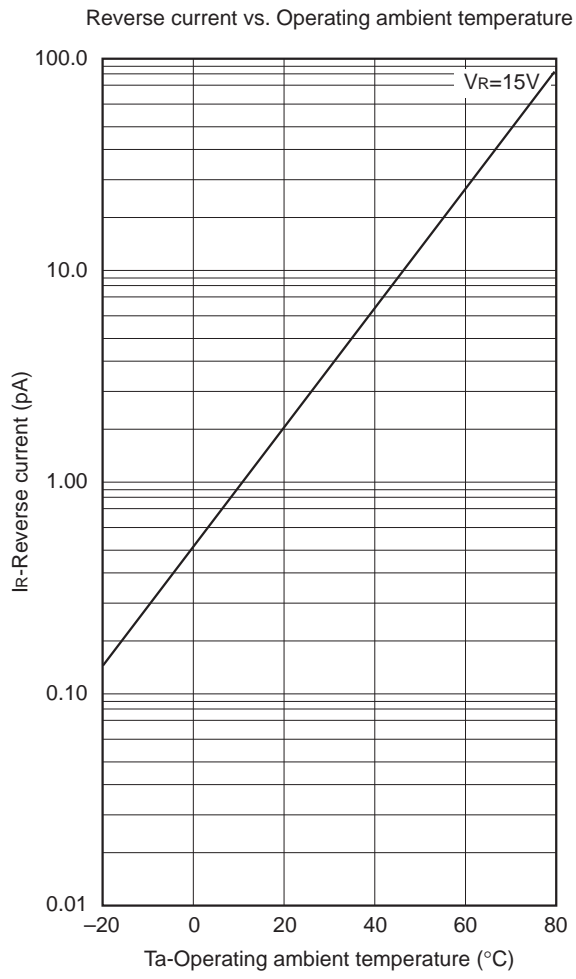


Temperature coefficient of diode capacitance



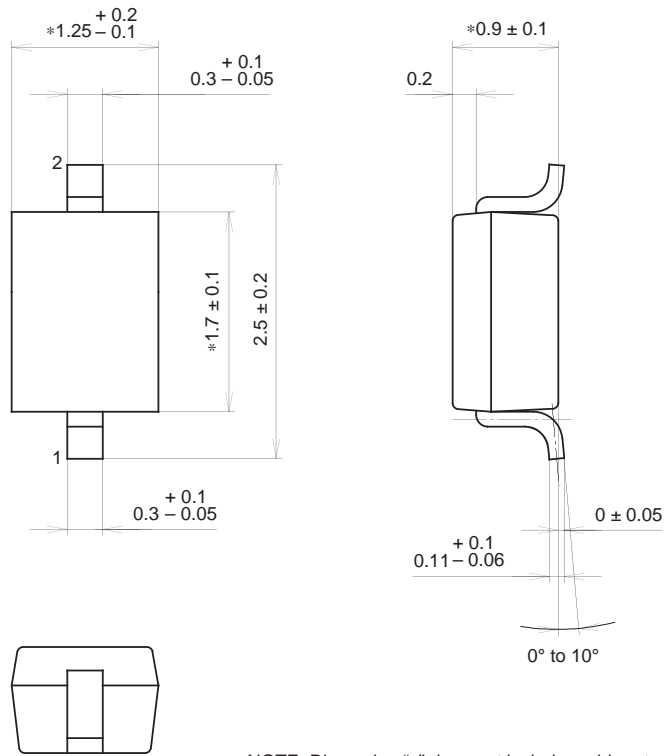
Diode capacitance vs. Operating ambient temperature





Package Outline Unit : mm

M-235

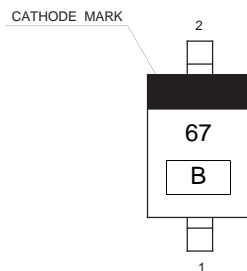


NOTE: Dimension "\*" does not include mold protrusion.

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.)