

Silicon Variable Capacitance Diode

Description

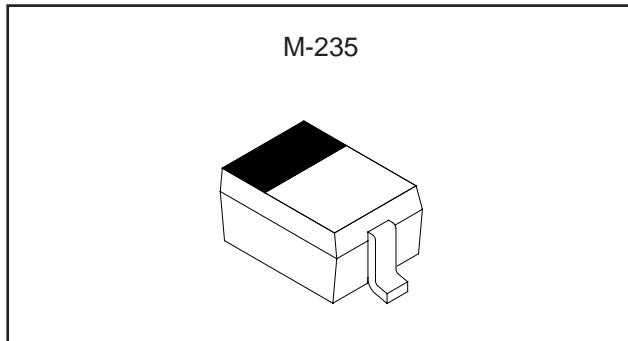
The 1T365 is a variable capacitance diode contained in super miniature package, and used for electronic-tuning of BS tuner.

Features

- Super miniature package
- Small capacitance 0.7 pF Typ. ($V_R=25$ V)
- Low leakage current 10 nA Max. ($V_R=28$ V)
- Small serial resistance 1.1 Ω Typ.
($V_R=1$ V, $f=470$ MHz)

Structure

Silicon epitaxial planar type diode



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

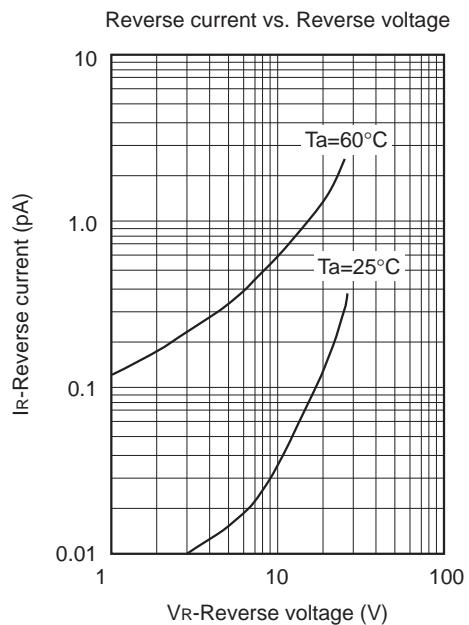
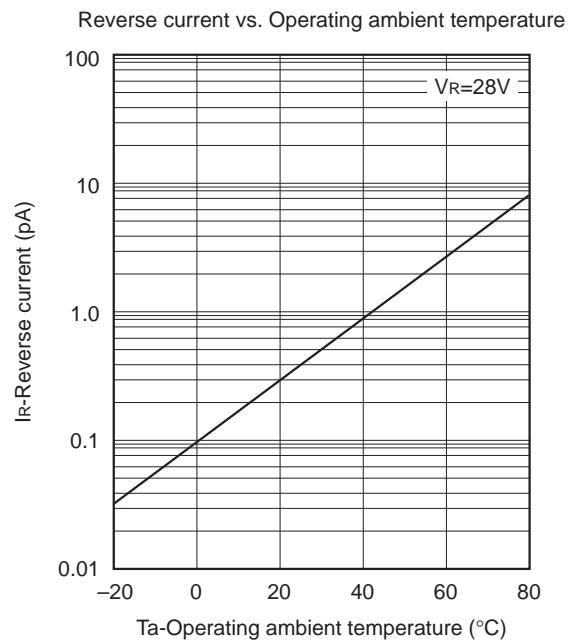
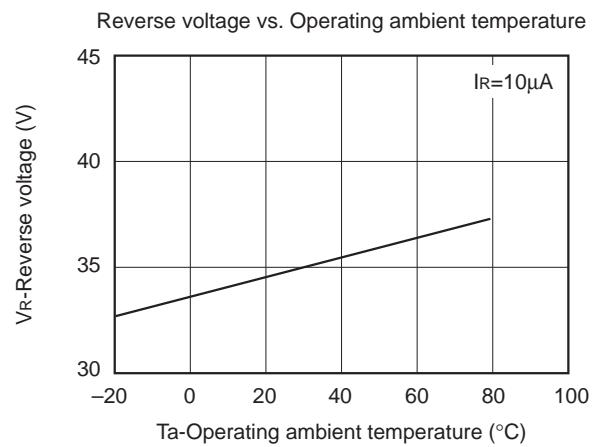
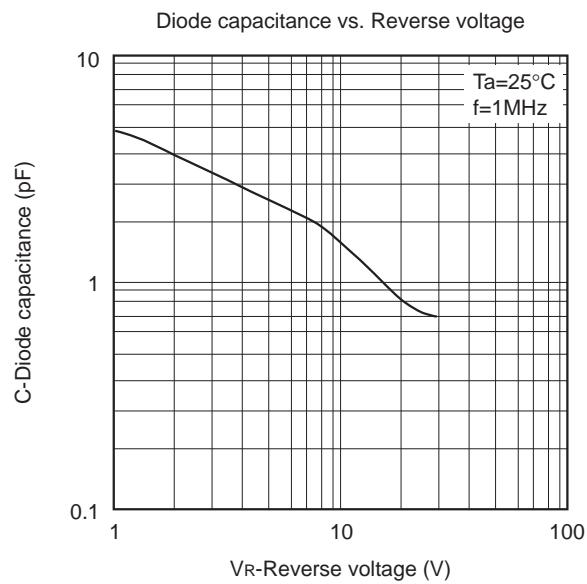
• Reverse voltage	V_R	30	V
• Maximum reverse voltage	V_{RM}	35	V
		($R_L \geq 10$ kΩ)	
• Operating temperature	T_{opr}	-20 to +75	°C
• Storage temperature	T_{stg}	-65 to +150	°C

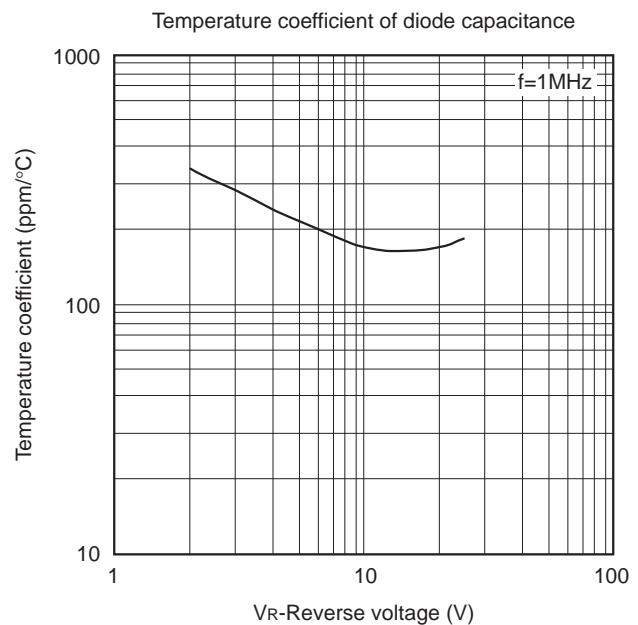
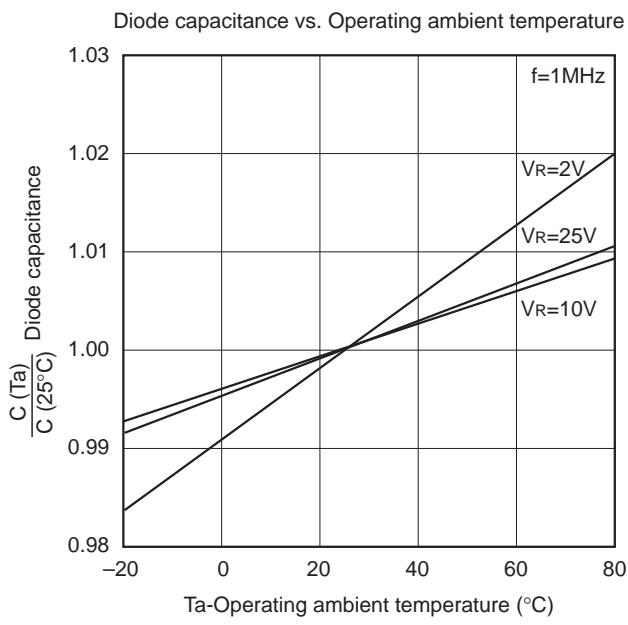
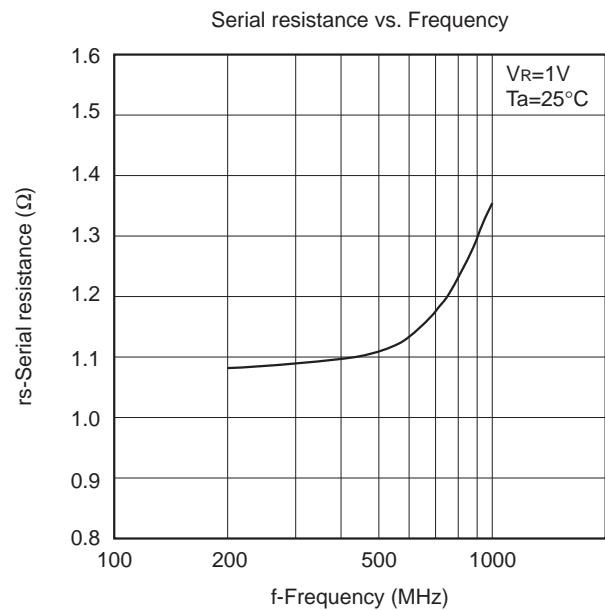
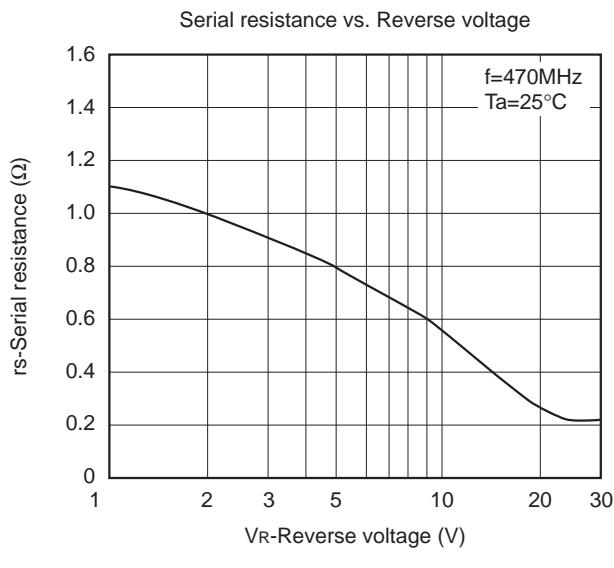
Electrical Characteristics

($T_a=25$ °C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I_R	$V_R=28$ V			10	nA
Diode capacitance	C_2	$V_R=2$ V, $f=1$ MHz	3.31		4.55	pF
	C_{25}	$V_R=25$ V, $f=1$ MHz	0.61	0.70	0.77	pF
Capacitance ratio	C_2/C_{25}		5.0	5.7		
Serial resistance	r_s	$V_R=1$ V, $f=470$ MHz			1.1	1.8
Capacitance deviation in a matching group	ΔC	$V_R=2$ to 25 V, $f=1$ MHz			5.0	%

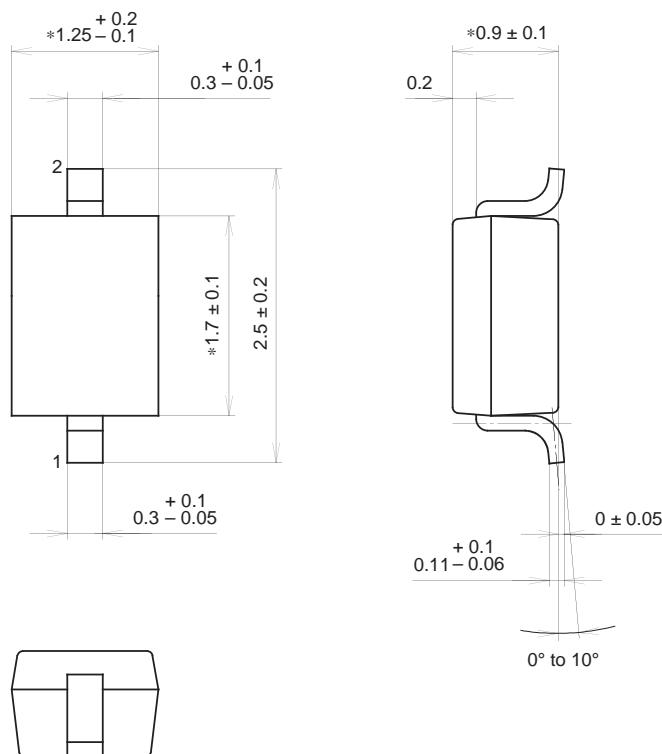
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Example of Representative Characteristics



Package Outline Unit : mm

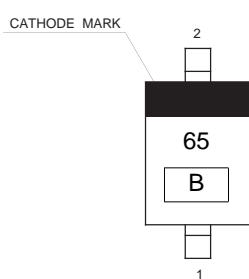
M-235



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.)