

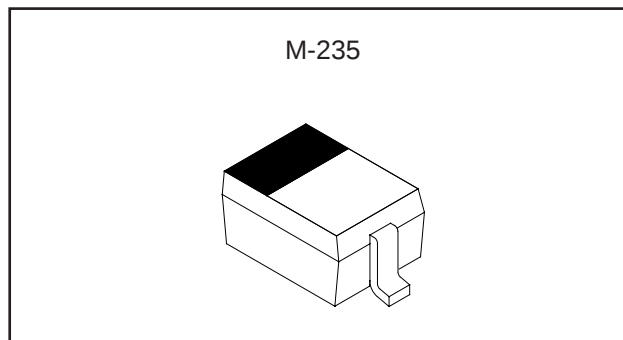
Silicon Variable Capacitance Diode

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. ($V_R=25\text{ V}$)
- Low leakage current 10 nA Max. ($V_R=28\text{ V}$)
- Small serial resistance 1.1 Ω Typ.
($V_R=1\text{ V}$, $f=470\text{ MHz}$)



Structure

Silicon epitaxial planar type diode

Absolute Maximum Ratings (Ta=25 °C)

- | | | | |
|---------------------------|-----------|-------------------------|----|
| • Reverse voltage | V_R | 30 | V |
| • Maximum reverse voltage | V_{RM} | 35 | V |
| | | (R _L ≥10 kΩ) | |
| • Operating temperature | T_{opr} | −20 to +75 | °C |
| • Storage temperature | T_{stg} | −65 to +150 | °C |

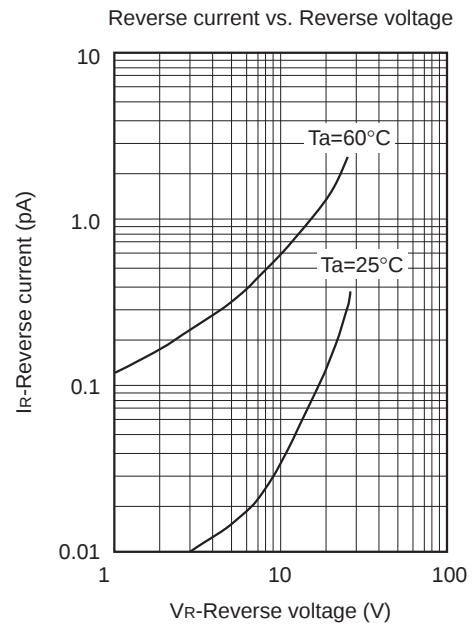
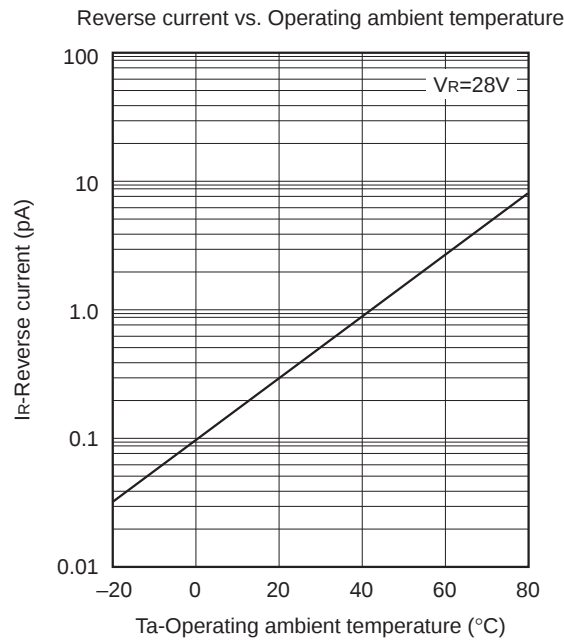
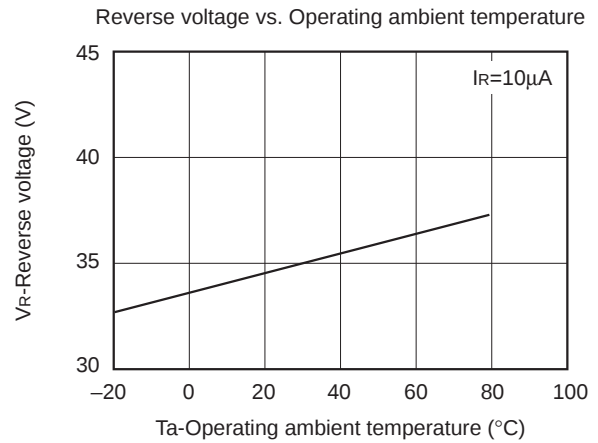
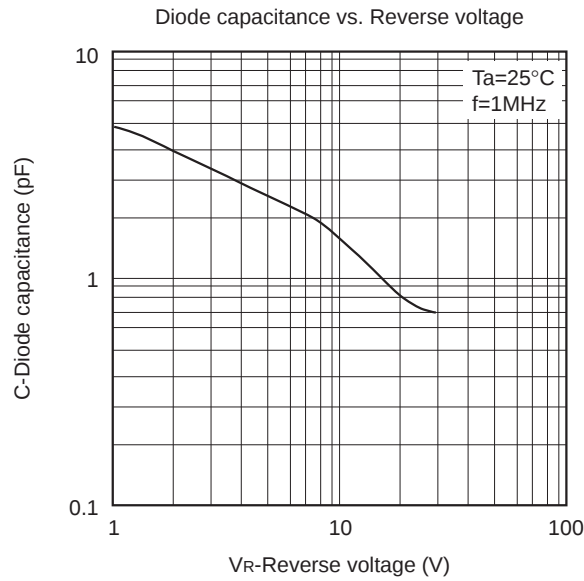
Electrical Characteristics

(Ta=25 °C)

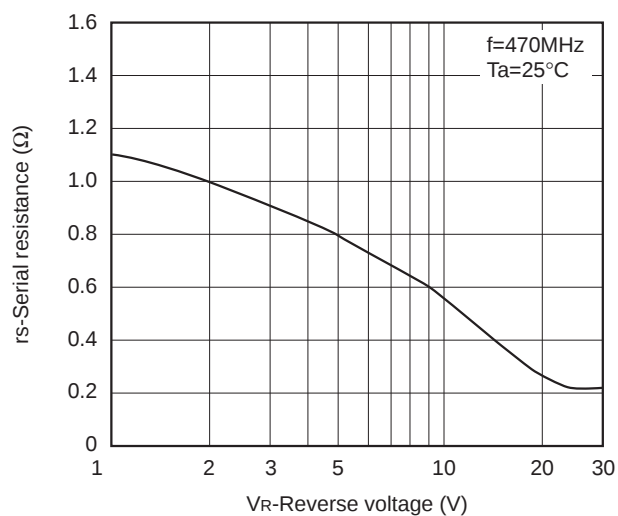
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	I_R	$V_R=28\text{ V}$			10	nA
Diode capacitance	C_2	$V_R=2\text{ V}, f=1\text{ MHz}$	3.31		4.55	pF
	C_{25}	$V_R=25\text{ V}, f=1\text{ MHz}$	0.61	0.70	0.77	pF
Capacitance ratio	C_2/C_{25}		5.0	5.7		
Serial resistance	r_s	$V_R=1\text{ V}, f=470\text{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

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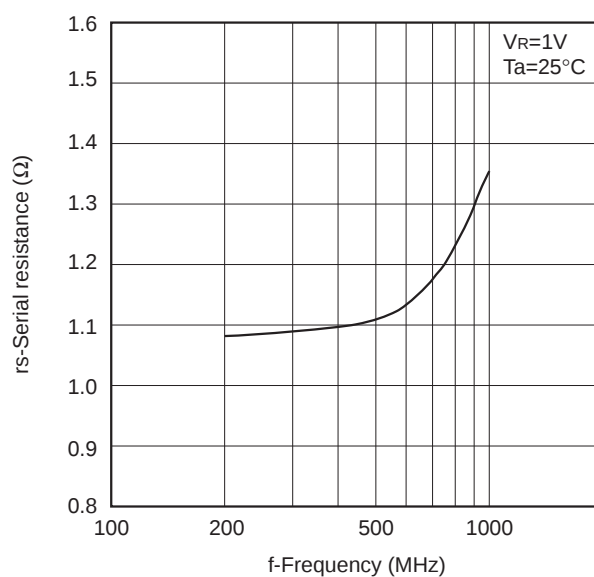
Example of Representative Characteristics



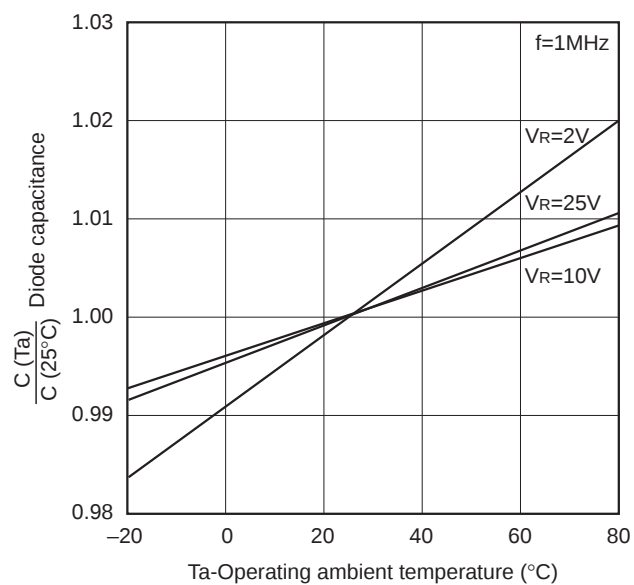
Serial resistance vs. Reverse voltage



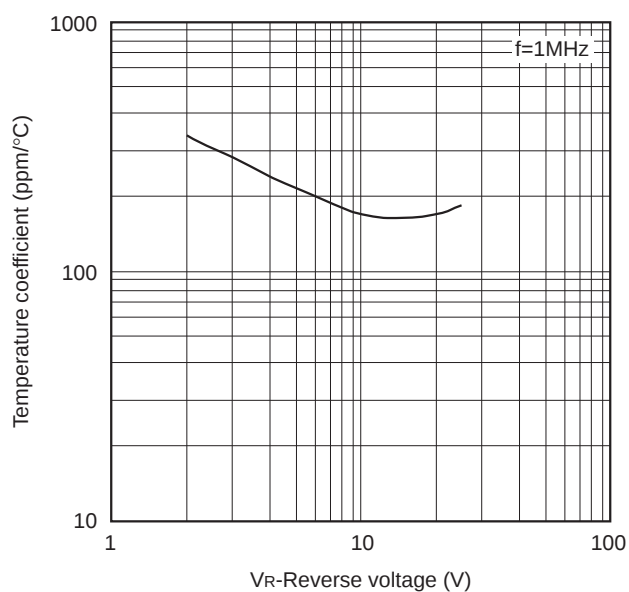
Serial resistance vs. Frequency



Diode capacitance vs. Operating ambient temperature

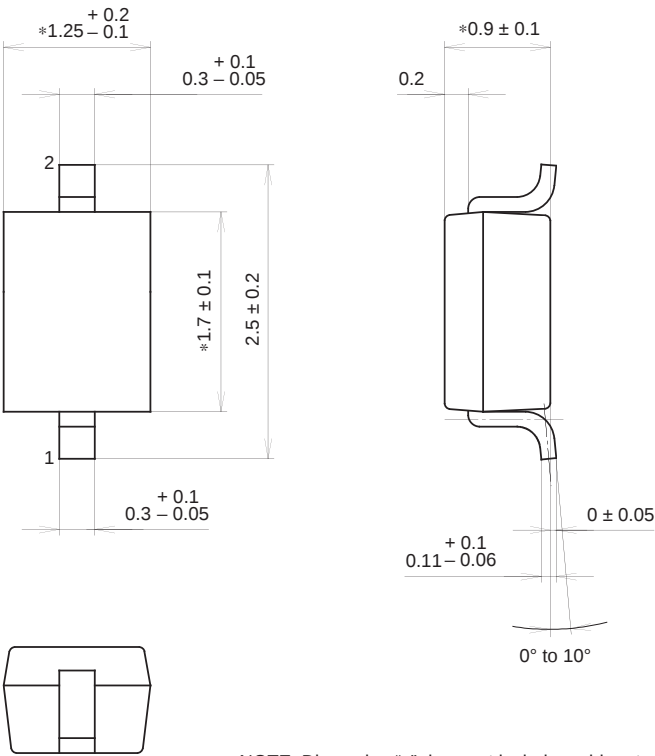


Temperature coefficient of diode capacitance



Package Outline Unit : mm

M-235

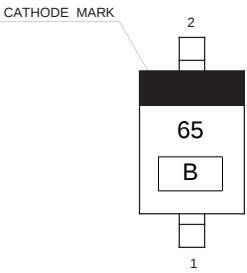


NOTE: Dimension "*" does not include mold protrusion.

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.)

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www.datasheetcatalog.com

Datasheets for electronics components.