

SONY

1T417

Variable Capacitance Diode

Description

The 1T417 is a variable capacitance diode designed for electronic tuning of BS/CS tuners using a super-small-miniature flat package (SSVC).

Features

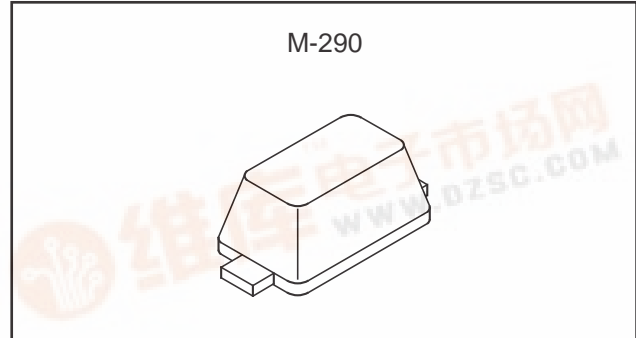
- Super-small-miniature flat package
- Low series resistance: 1.5 Ω Max. (f=470 MHz)
- Large capacitance ratio: 15.5 Typ. (C1/C25)
- Small leakage current: 10 nA Max. (VR=25 V)
- Capacitance deviation in a matching group: within 6 %

Applications

Electronic tuning of BS/CS tuners

Structure

Silicon epitaxial planar type diode



Absolute Maximum Ratings (Ta=25 °C)

- Reverse voltage VR 30 V
- Peak reverse voltage VRM 35 V (RL ≥ 10 kΩ)
- Operating temperature Topr -20 to +75 °C
- Storage temperature Tstg -65 to +150 °C

Electrical Characteristics

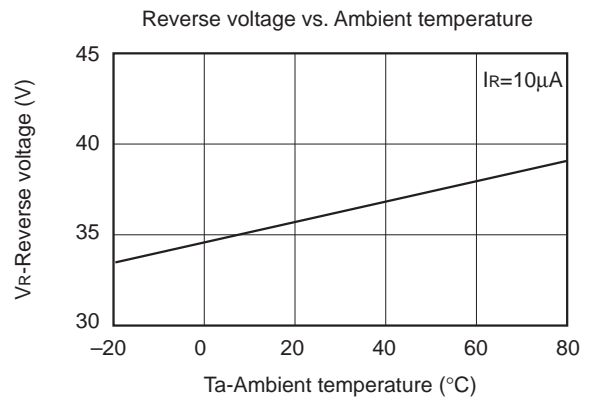
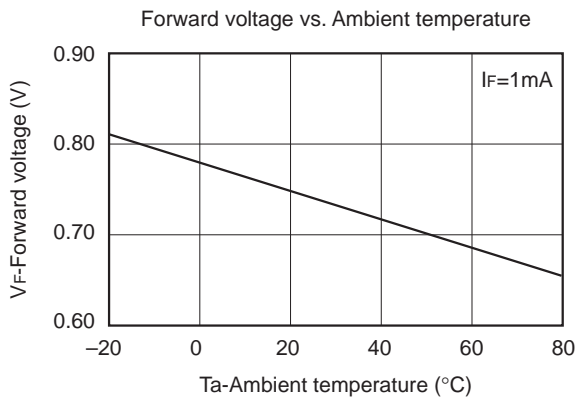
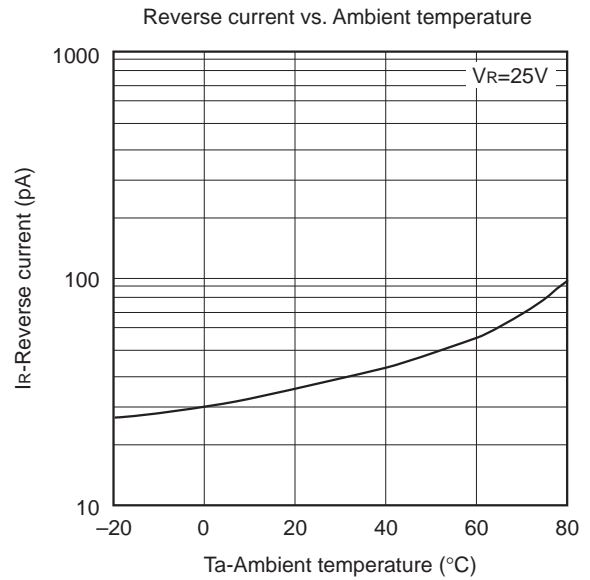
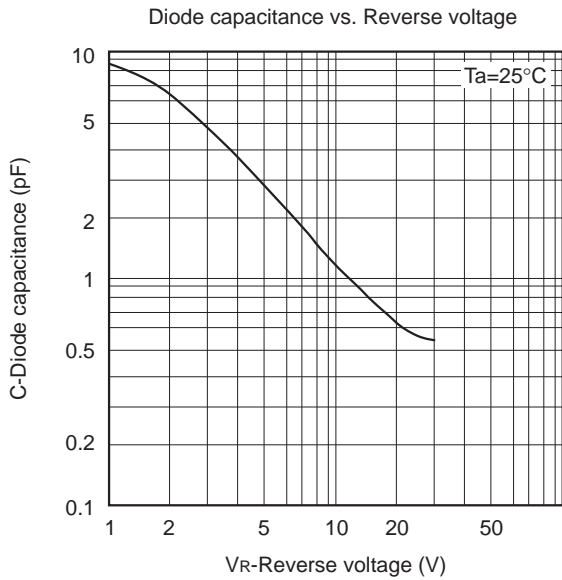
(Ta=25 °C)

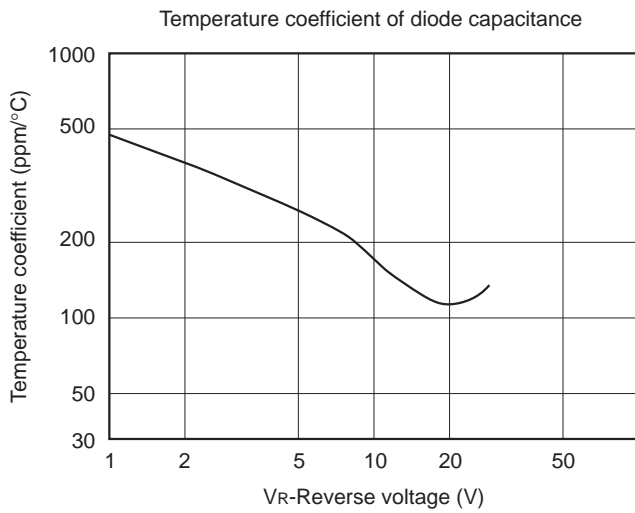
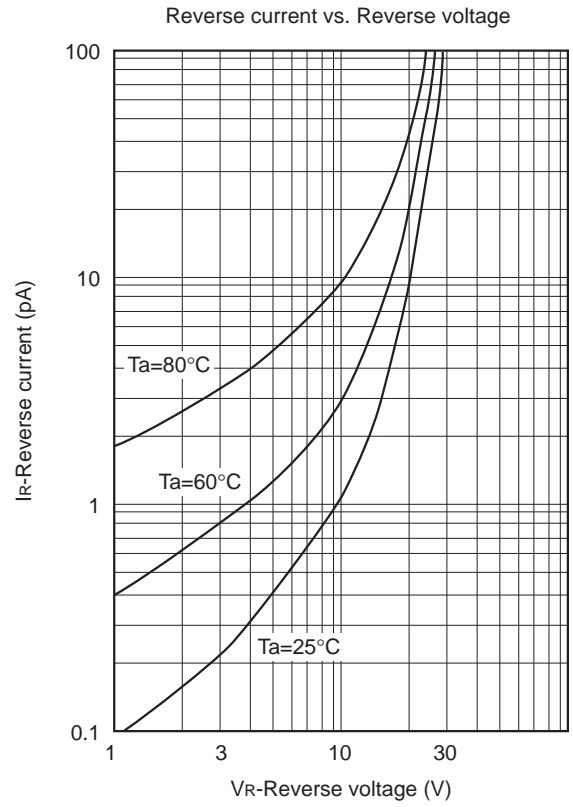
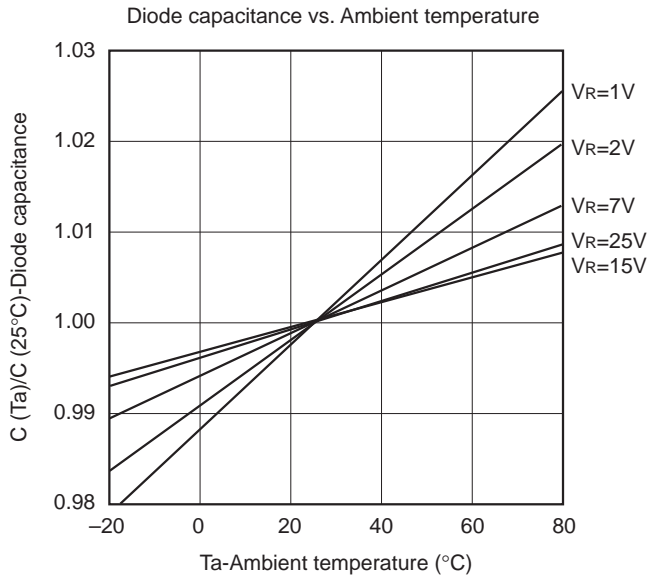
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse current	IR	VR=25 V			10	nA
Reverse voltage	VR	IR=1 μA	30			V
Diode capacitance	C1	VR=1 V, f=1 MHz	7.8	8.6	9.4	pF
	C25	VR=25 V, f=1 MHz	0.5		0.6	pF
Capacitance ratio	C1/C25		13.0	15.5		
Series resistance	rs	VR=5 V, f=470 MHz		1.30	1.50	Ω
Capacitance deviation in a matching group	ΔC	VR=1 to 25 V, f=1 MHz			6.0	%

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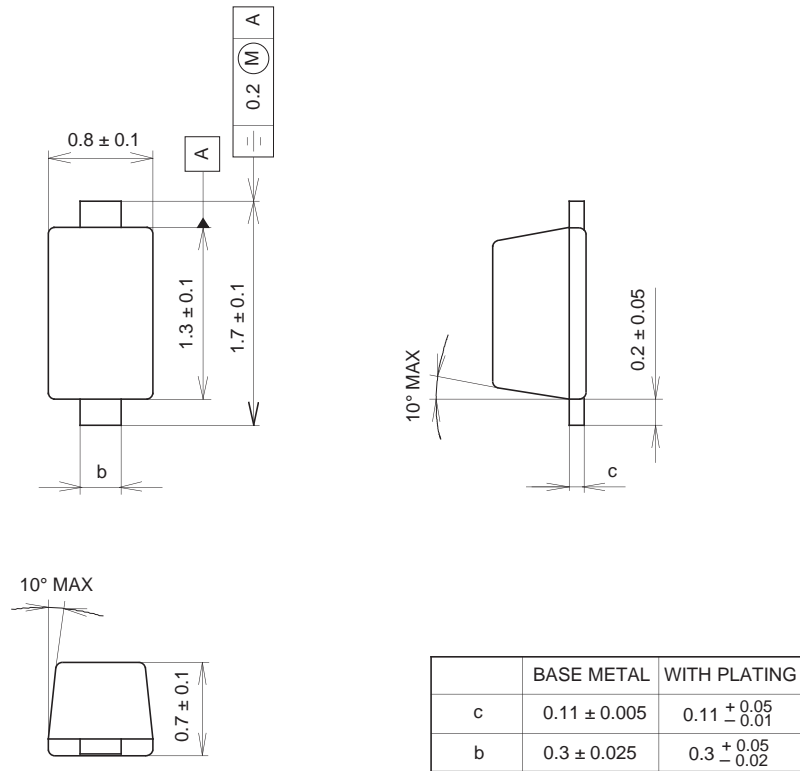
Example of Representative Characteristics





Package Outline Unit : mm

M-290



SONY CODE	M-290	PACKAGE MATERIAL	EPOXY RESIN
EIAJ CODE	_____	LEAD TREATMENT	SOLDER PLATING
JEDEC CODE	_____	LEAD MATERIAL	COPPER
		PACKAGE WEIGHT	0.002g

Mark

