

SONY

1T410

Variable Capacitance Diode

Description

The 1T410 is a variable capacitance diode designed for electronic tuning of BS/CS tuners using a super-small-miniature flat package (SSVC).

Features

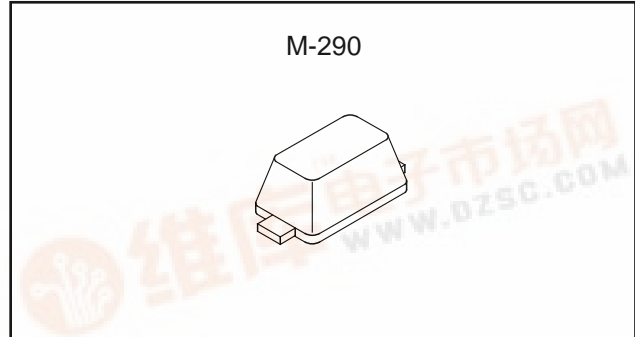
- Super-small-miniature flat package
- Low series resistance: 1.5 Ω Max. (f=470 MHz)
- Large capacitance ratio: 12.0 Typ. (C1/C25)
- Small leakage current: 10 nA Max. (VR=25 V)
- Capacitance deviation in a matching group: within 6 %

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

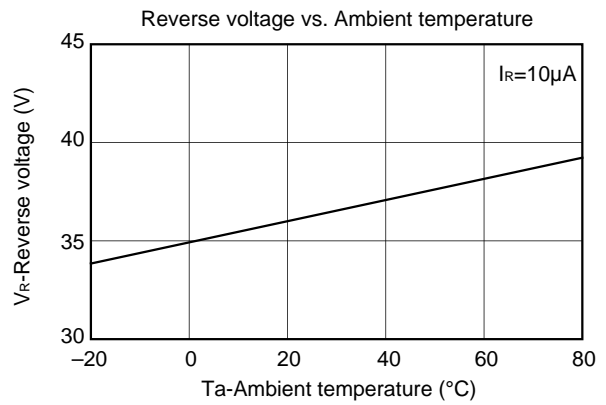
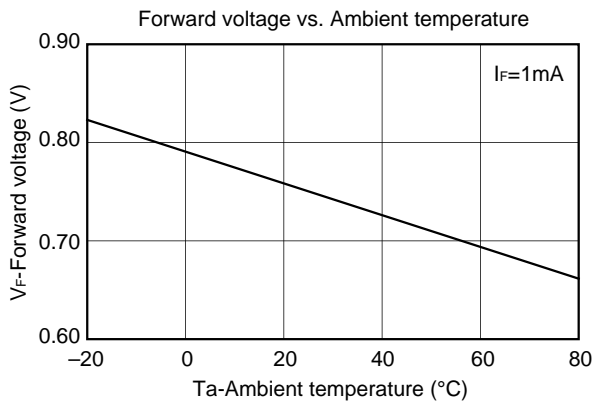
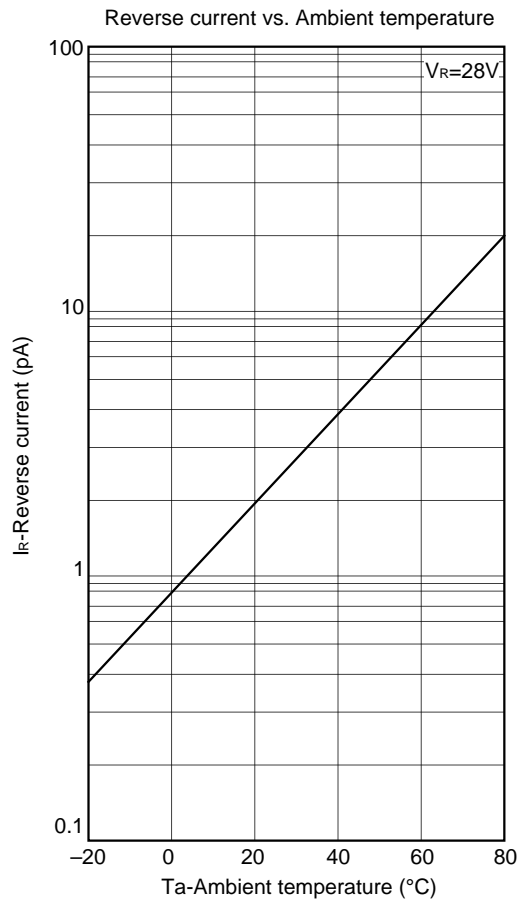
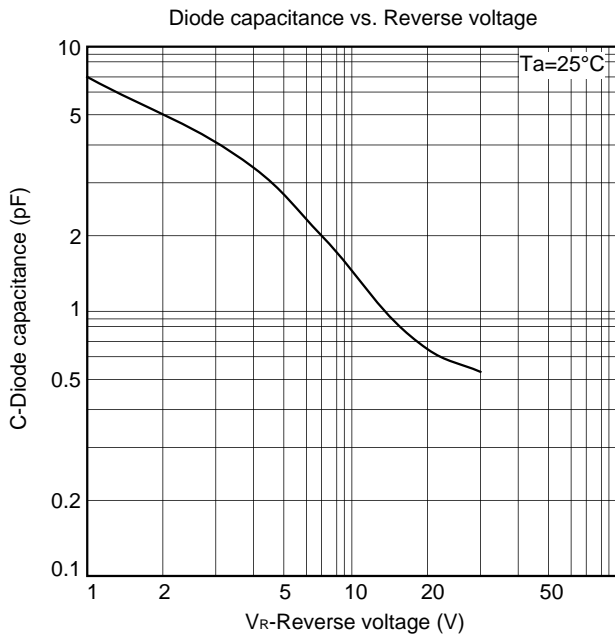
Electrical Characteristics

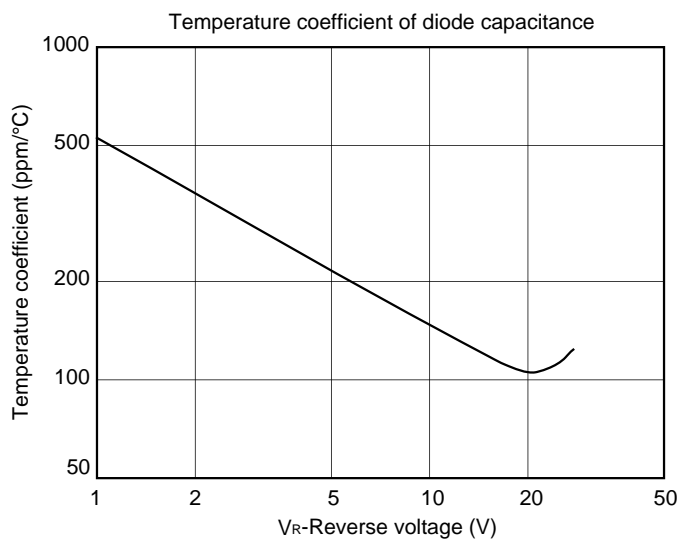
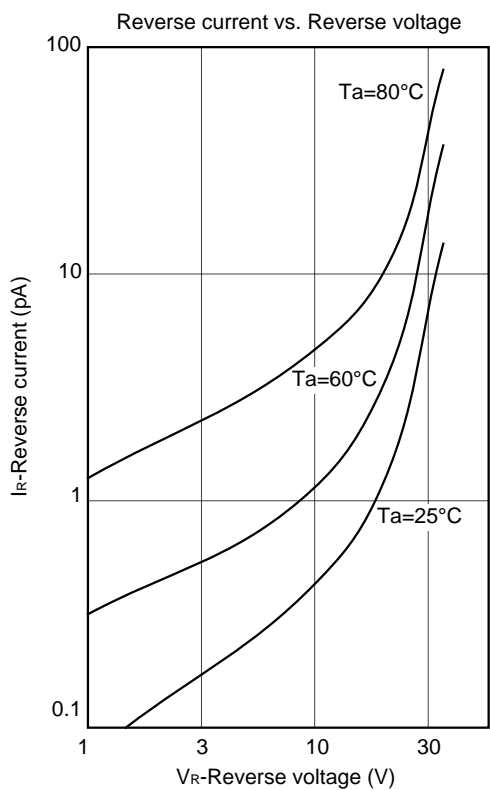
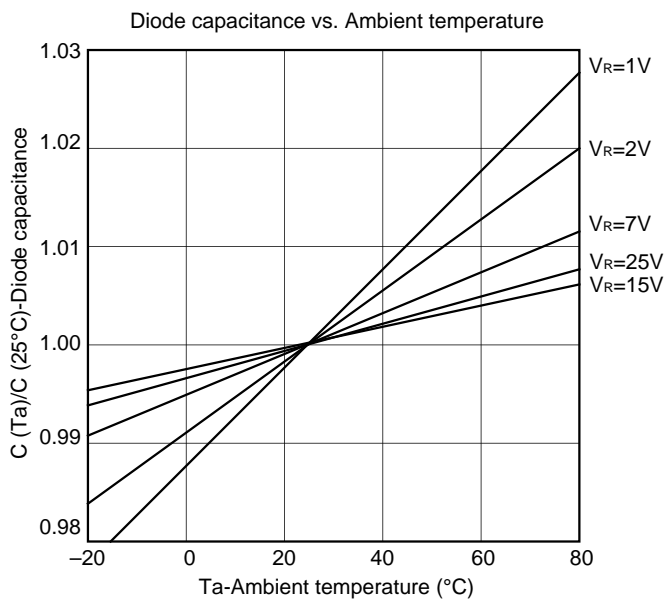
(Ta=25 °C)

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	5.96		7.16	pF
	C25	VR=25 V, f=1 MHz	0.46		0.60	pF
Capacitance ratio	C1/C25		10.0	12.0		
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	%



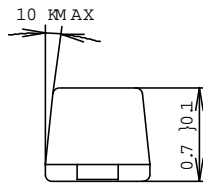
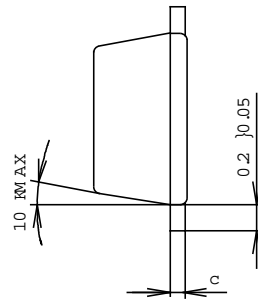
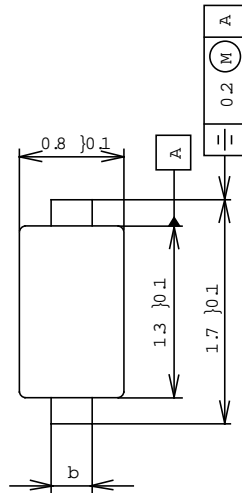
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Package Outline Unit : mm

M -290



	BASE METAL	WITH PLATING
c	0.11 }0.005	0.11 {0.05 0.01
b	0.3 }0.025	0.3 {0.05 0.02

SONY CODE	M-290
EIAJ CODE	—
JEDEC CODE	—

PACKAGE MATERIAL	EPOXY RESIN
LEAD TREATMENT	SOLDER PLATING
LEAD MATERIAL	COPPER
PACKAGE WEIGHT	0.002g

Mark



1 : Cathode

2 : Anode