

SONY.

1T32/1T32A

Silicon Variable Capacitance Diode

Description

The 1T32/1T32A is a variable capacitance diode designed for use in electric tuning for UHF, VHF and TV tuner, and AFT which make their packages more compact so as to match tuner miniaturization easily, keeping excellent characteristics of former 1T25 type.

Features

- Compact package
- Low serial resistance 0.52Ω Typ. (f = 470 MHz)
- Large capacitance ratio 6.5 Typ. (C2/C2s)
- Small leakage current 10 nA Max. (VR = 28V)
- 1T32(A)-T7, 1T32(A)-T8 is for taping.

Structure

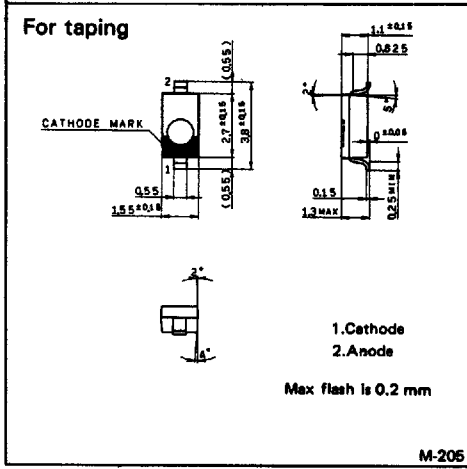
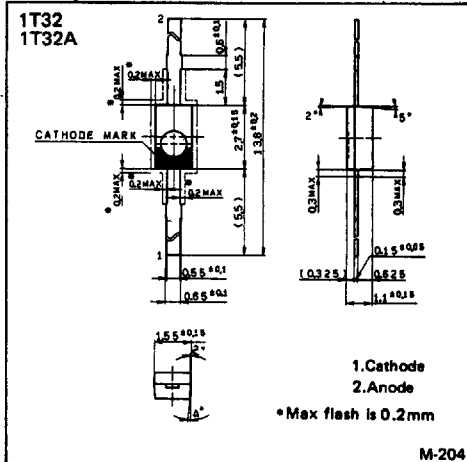
Silicon epitaxial planar type diode

Applications

Electric tuning for UHF, VHF or TV tuner, or AFT

Package Outline

Unit: mm



Absolute Maximum Ratings (Ta = 25°C)

• Reverse voltage	VR	30	V
• Peak reverse voltage	VRM	35	V (RL ≧ 10 kΩ)
• Operating temperature	Topr	85	°C
• Storage temperature	Tstg	-30 to +120	°C

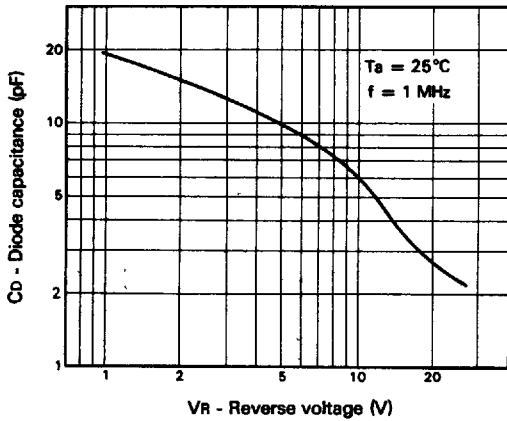
Electrical Characteristics

Ta = 25°C

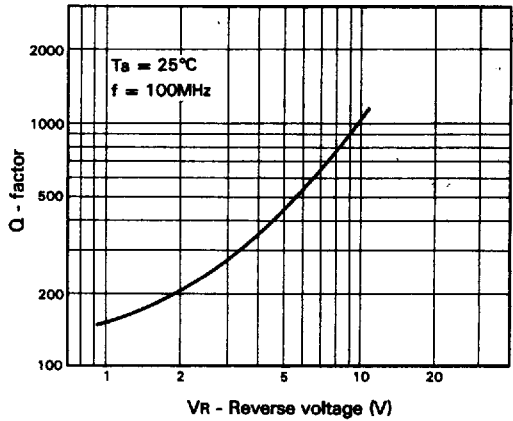
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse current	I _R	V _R = 28V			10	nA
Diode capacitance	C ₂	V _R = 2V, f = 1 MHz	14.01	15.00	16.33	pF
	C ₂₅	V _R = 25V, f = 1 MHz	2.10	2.27	2.39	pF
Serial resistance	r _s	C _D = 14 pF, f = 470 MHz		0.52	0.6	Ω
Maximum-capacitance deviation in the Same ranking*	ΔC	V _R = 2 to 25V			3 (1T32) 2 (1T32A)	%

*Note) Applied only to tuning.

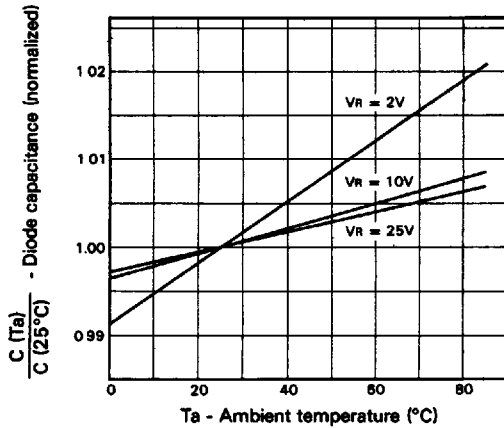
Diode capacitance vs. Reverse voltage



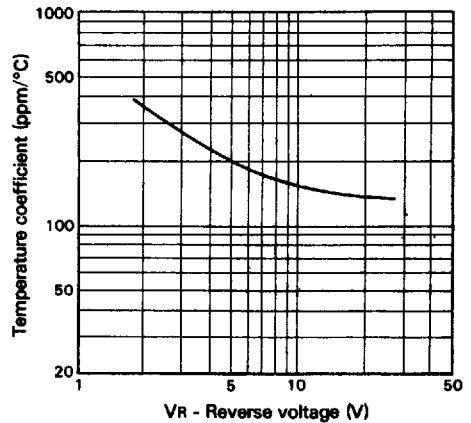
Q - factor vs. Reverse voltage



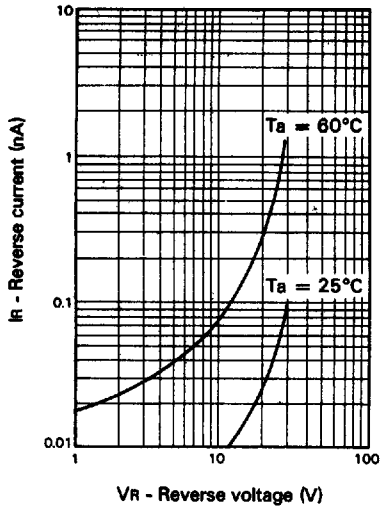
Diode capacitance vs. Ambient temperature



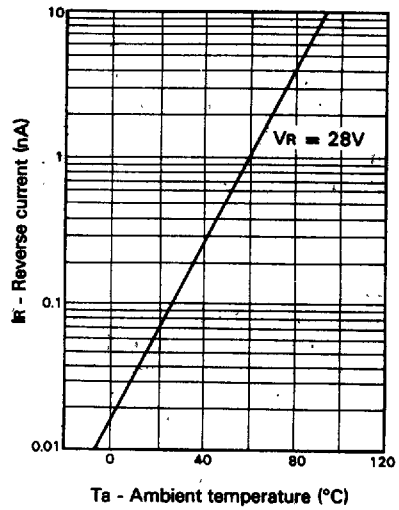
Temperature coefficient of the diode capacitance



Reverse current vs. Reverse voltage



Reverse current vs. Ambient temperature



Reverse breakdown voltage vs. Ambient temperature

