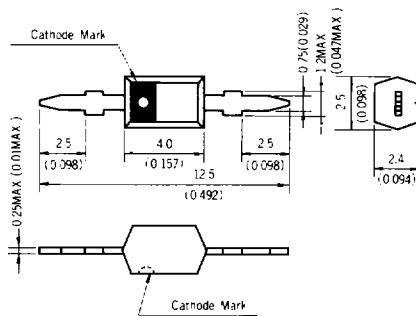


VARACTOR DIODES 1S2208(B), 1S2209(B)

UHF/VHF TUNER SILICON EPITAXIAL DIODES ESVAC[®]

PACKAGE DIMENSIONS in millimeters (inches)



The 1S2208(B) and 1S2209(B) are a hyper-abrupt junction type voltage-variable capacitance diodes.

The 1S2208(B) and 1S2209(B) are designed for electronic tuning circuit application in UHF and VHF.

FEATURES

- Low series resistance. 0.35Ω TYP.
- High capacitance ratio.
- Low leakage current.
- High reliability.

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Peak Reverse Voltage	V _{RM}	30	V
DC Reverse Voltage	V _R	30	V
Storage Temperature	T _{stg}	-55 to +125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	1S2208(B)			1S2209(B)			UNIT	TEST CONDITIONS
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Reverse Voltage	V _R	30			30			V	I _R = 1.0μA
Capacitance	C _{t3}	11.0		12.65	10.3		12.90	pF	V _R = 3.0V, f = 1.0MHz
	C _{t25}	2.0		2.3	2.0		2.5	pF	V _R = 25V, f = 1.0MHz
Capacitance Ratio	N	4.5			4.0				C _{t3} / C _{t25}
Series Resistance	r _s		0.35	0.6		0.35	0.6	Ω	C = 9.0pF, f = 50MHz

NOTE : Diodes are available in matched sets of 20, 60, 120, 120xn units.

For two diodes of one set the following conditions are relevant :

The variations ΔC in capacitance values at V_R = 3, 10, 18 and 25V are less than 2% for 1S2208(B), 3% for 1S2209(B).

$$\Delta C = \frac{C_{\max.} - C_{\min.}}{C_{\min.}} \times 100 (\%)$$

TYPICAL CHARACTERISTICS (T_a = 25°C)

TERMINAL CAPACITANCE vs. REVERSE VOLTAGE

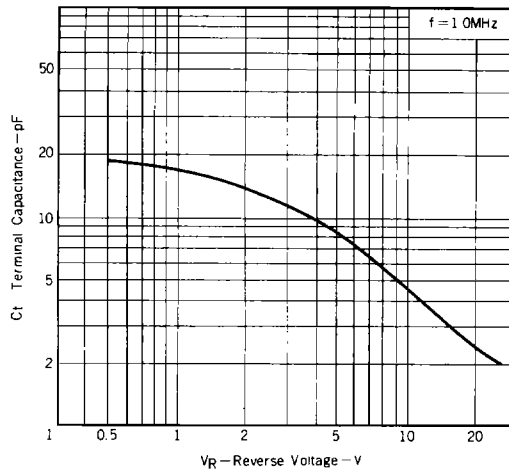


FIGURE OF MERIT vs. FREQUENCY

