



NTE618 Varactor Silicon Tuning Diode for AM Radio

Description:

The NTE618 is a silicon varactor diode with a good linearity and high capacitance ratio that is capable of being operated from a low voltage. This device is intended for use in AM receiver electronic tuning applications.

Features:

- High Capacitance Ratio: $C_R = 15.5$ (Min)
- Guaranteed Figure of Merit: $Q = 200$ (Min) @ $V_R = 1V$, $f = 1MHz$

Absolute Maximum Ratings: ($T_A = +25^\circ C$ unless otherwise specified)

Reverse Voltage, V_R 16V
 Operating Junction Temperature, T_J $+100^\circ C$
 Storage Temperature Range, T_{stg} -55° to $+100^\circ C$

Electrical Characteristics: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown Voltage	$V_{(BR)R}$	$I_R = 10\mu A$	16	—	—	V
Reverse Current	I_R	$V_R = 9V$	—	—	100	nA
Interterminal Capacitance	$C_{1.2V}$	$V_R = 1.2V$, $f = 1MHz$	420.0	—	459.1	pF
	$C_{3.5V}$	$V_R = 3.5V$, $f = 1MHz$	144.2	—	192.1	pF
	$C_{6.0V}$	$V_R = 6.0V$, $f = 1MHz$	45.71	—	60.91	pF
	$C_{8.0V}$	$V_R = 8.0V$, $f = 1MHz$	20.30	—	23.54	pF
Figure of Merit	Q	$V_R = 1V$, $f = 1MHz$	200	—	—	
Capacitance Ratio	C_R	$C_{1.2V}/C_{8.0V}$, $f = 1MHz$	15.5	—	—	
matching Tolerance	ΔC_m	$(C_{max} - C_{min})/C_{min}$	—	—	0.03	

