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## 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,  $T_{stg}$  .....  $-55^\circ$  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	$\Delta C_m$	$(C_{max} - C_{min})/C_{min}$	–	–	0.03	

