

CODI Semiconductor Inc.

HIGH Q
VOLTAGE VARIABLE
CAPACITORS
1N5461 thru 1N5476

HIGH Q - up to 600 VOLTAGE VARIABLE CAPACITORS for UHF tuning applications

1N5461, A, B, C thru 1N5476, A, B, C

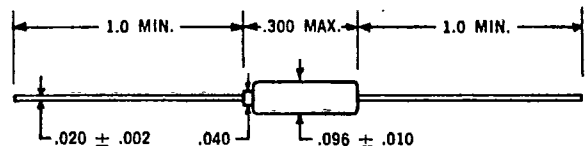
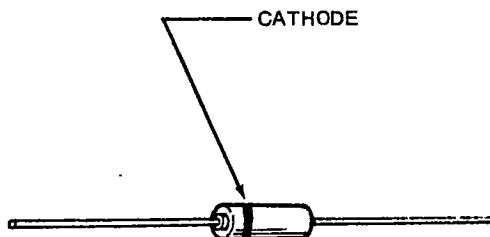
SPECIAL FEATURES

6.8-100 pica farad

CODI Semiconductor's BiTacial™, high Q, abrupt-junction Voltage Variable Capacitors are designed specifically for critical and sophisticated frequency control applications through the UHF range.

- High Q
- Precision Tracking
- Low Leakage
- High Reliability
- Stable

The computer-aided design and evaluation of these devices guarantees tight tolerance of capacitance-versus-voltage tracking over the complete range of tuning. A computer printout which includes the capacitance equation with calculated values of the barrier-voltage and the exponent can be supplied at extra cost.



(DO-7)
PHYSICAL CHARACTERISTICS

1N5461, A, B, C thru 1N5476, A, B, C

Specifications

HIGH Q VOLTAGE VARIABLE CAPACITORS 1N5461 thru 1N5476

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise specified)

Reverse Breakdown Voltage (BV_R)	@ $I_R = 10\mu\text{A dc}$	30 volts
Reverse Current (I_R)	@ $V_R = 25\text{Vdc}$	$0.02\mu\text{A}$
	@ $V_R = -25\text{Vdc}$, $T_A = 150^\circ\text{C}$	$20.00\mu\text{A}$
Series Inductance (L_s)	@ $f = 250\text{MHz}$ lead length = $1/16''$	10nH
Case Capacitance (C_c)	@ $f = 1\text{MHz}$	0.25pf
Diode Capacitance	@ $V_R = 4.0\text{Vdc}$,	$400\text{ppm}/^\circ\text{C}$
Temperature Coefficient (TC)	@ $f = 1\text{MHz}$	
Dissipation (P_D): 400mw (Derate $2.65\text{ mW}/^\circ\text{C}$ above $T_A = 25^\circ\text{C}$)		
Operating Temperature Range (T_A): -55°C to $+175^\circ\text{C}$		
Storage Temperature Range (T_{STG}): -55°C to $+200^\circ\text{C}$		

ELECTRICAL CHARACTERISTICS

(At $T_A = 25^\circ\text{C}$ unless otherwise specified)

JEDEC Type No.	Nominal Capacitance* C , @ $V_R = 4\text{Vdc}$ $f = 1\text{MHz}$	Capacitance Tuning Ratio C_{2V}/C_{30V} $f = 1\text{MHz}$		Figure of Merit, Q @ $V_R = 4\text{Vdc}$ $f = 50\text{MHz}$
		(Min.)	(Max.)	
	(pf)	(Min.)	(Max.)	(Min.)
1N5461	6.8	2.7	3.1	600
1N5462	8.2	2.8	3.1	600
1N5463	10.0	2.8	3.1	550
1N5464	12.0	2.8	3.1	550
1N5465	15.0	2.8	3.1	550
1N5466	18.0	2.9	3.1	500
1N5467	20.0	2.9	3.1	500
1N5468	22.0	2.9	3.2	500
1N5469	27.0	2.9	3.2	500
1N5470	33.0	2.9	3.2	500
1N5471	39.0	2.9	3.2	450
1N5472	47.0	2.9	3.2	400
1N5473	56.0	2.9	3.3	300
1N5474	68.0	2.9	3.3	250
1N5475	82.0	2.9	3.3	225
1N5476	100.0	2.9	3.3	200

Figure of Merit (Q) vs Reverse Bias Voltage

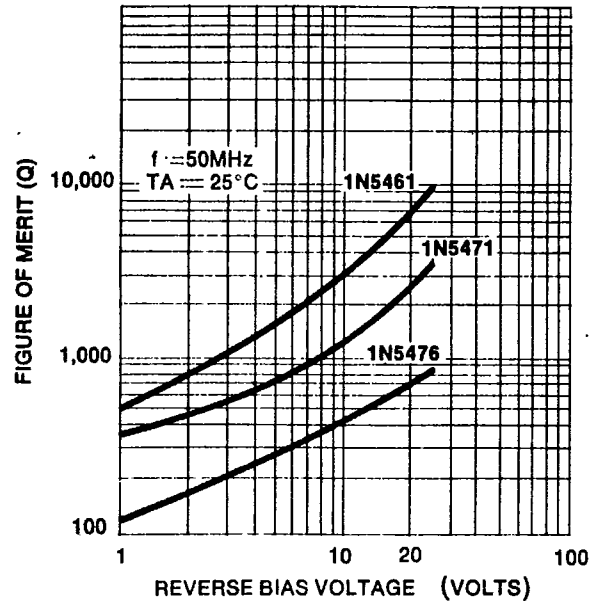
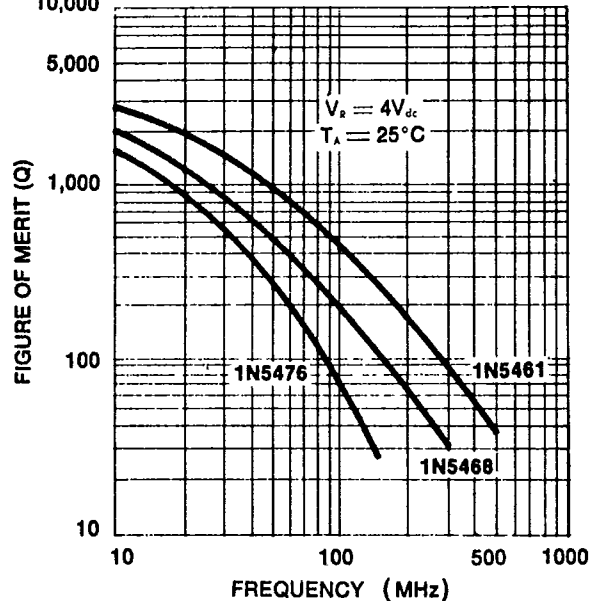


Figure of Merit (Q) vs Frequency



CODI welcomes your inquiries concerning other Voltage Variable Capacitors

- Higher Tuning ratio
- Ultra-Low Leakage
- JAN TX types
- Higher Capacitance
- Micro miniature package

*Available in the following tolerances:

No Suffix	$\pm 20\%$
A	$\pm 10\%$
B	$\pm 5\%$
C	$\pm 2\%$