

CODI Semiconductor Inc.

HIGH Q
VOLTAGE VARIABLE
CAPACITORS
1N5681 thru 1N5695

HIGH Q - MEDIUM TUNING RANGE VOLTAGE VARIABLE CAPACITORS for UHF tuning applications

1N5681, A, B, C thru 1N5695, A, B, C

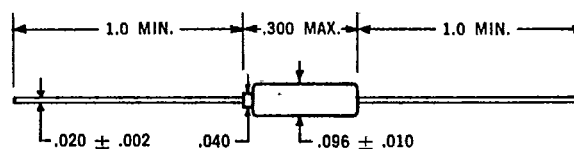
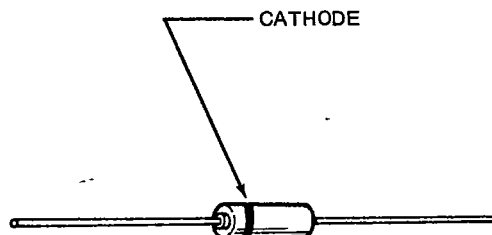
6.8-100 pica farad

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

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.

SPECIAL FEATURES

- High Q
- Medium Tuning Range
- Precision Tracking
- Low Leakage
- High Reliability
- Stable



(D0-7)
PHYSICAL CHARACTERISTICS

1N5681, A, B, C thru 1N5695, A, B, C

Specifications

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

Reverse Breakdown Voltage (BV_R)	@ $I_R = 10\mu\text{A dc}$	45 volts
Reverse Current (I_R)	@ $V_R = 40\text{V dc}$	$0.02\mu\text{A}$
	@ $V_R = 40\text{V dc}, T_A = 150^\circ\text{C}$	$20.00\mu\text{A}$
Series Inductance (L_S)	@ $f = 250\text{MHz}$ lead length = 1/16"	6nH
Case Capacitance (C_c)	@ $f = 1\text{MHz}$	$0.25\text{pf} \pm 20\%$
Diode Capacitance	@ $V_R = 4.0\text{V dc}$,	$300\text{ppm}/^\circ\text{C}$
Temperature Coefficient (TC)	@ 25°C	
Dissipation (P_D): 400mw (Derate 2.65 mW/ $^\circ\text{C}$ above $T_A = 25^\circ\text{C}$)		
Operating Temperature Range (T_A): -65°C to $+150^\circ\text{C}$		
Storage Temperature Range (T_{STG}): -65°C to $+200^\circ\text{C}$		

ELECTRICAL CHARACTERISTICS

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

JEDEC Type No.	Nominal Capacitance * C_j @ $V_R = 4\text{V dc}$ $f = 1\text{MHz}$	Capacitance Tuning Ratio C_{2V}/C_{30V} $f = 1\text{MHz}$		Figure of Merit. Q @ $V_R = 4\text{V dc}$ $f = 50\text{MHz}$
		(Min.)	(Typ.)	
	(pf)	(Min.)	(Typ.)	(Min.)
1N5681	6.8	3.1	3.3	600
1N5682	8.2	3.1	3.3	600
1N5683	10.0	3.2	3.4	550
1N5684	12.0	3.2	3.4	550
1N5685	15.0	3.2	3.4	550
1N5686	18.0	3.2	3.4	500
1N5687	22.0	3.3	3.5	500
1N5688	27.0	3.3	3.5	500
1N5689	33.0	3.3	3.5	500
1N5690	39.0	3.3	3.5	450
1N5691	47.0	3.3	3.5	400
1N5692	56.0	3.3	3.5	300
1N5693	68.0	3.3	3.5	250
1N5694	82.0	3.3	3.5	225
1N5695	100.0	3.3	3.5	200

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	$\pm 2\%$

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