CRYSTALONCS
2805 Veterans Highway
Suite 14
Ronkonkoma, N.Y. 11779

VOLTAGE-VARIABLE-CAPACITANCE DIODES
6.8 — 100 pF 20 VOLTS
CV1620 Series replaces MV1620 Series

CV1620 thru CV1650

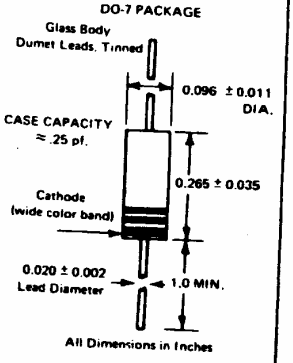
GEOMETRY 415

. . . epitaxial passivated tuning diodes designed for AFC applications in radio, TV, and general electronic-tuning.

- Maximum Working Voltage of 20 V
- Excellent Q Factor at High Frequencies
- 100% Hermetic Seal Check
- Solid-State Reliability to Replace Mechanical Tuning Methods

MECHANICAL DATA

DO-7 PACKAGE



MAXIMUM RATINGS: T_C = 25°C (UNLESS OTHERWISE NOTED)

Characteristic	Symbol	Rating	Unit
Reverse Voltage	V_R	20	Volts
Forward Current	I_F	250	mA
Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	400 2.67	mW mW/°C
Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	2 13.3	Watts mW/°C
Junction Temperature	T_J	+175	°C
Storage Temperature Range	T_{stg}	−65 to +200	°C

ELECTRICAL CHARACTERISTICS: T_A = 25°C (UNLESS OTHERWISE NOTED)

Characteristic — All Types	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage	I_R = 10 μAdc	BV_R	20	—	—	Vdc
Reverse Voltage Leakage Current	V_R = 15 Vdc	I_R	—	—	0.1	μAdc
Series Inductance	f = 250 MHz, lead length = 1/16"	L_S	—	5.0	10	nH
Case Capacitance	f = 1 MHz, lead length = 1/16"	C_C	—	0.25	0.3	pF

Device	C_T, Diode Capacitance V_R = 4 Vdc, f = 1 MHz, pF			Q, Figure of Merit V_R = 4 Vdc, f = 50 MHz	TR, Tuning Ratio C_2/C_{20} f = 1 MHz	
	Min	Nom	Max	Min	Min	Max
CV1620	6.1	6.8	7.5	300	2.0	3.2
CV1622	7.4	8.2	9.0	300	2.0	3.2
CV1624	9.0	10.0	11.0	300	2.0	3.2
CV1626	10.8	12.0	13.2	300	2.0	3.2
CV1628	13.5	15.0	16.5	250	2.0	3.2
CV1630	16.2	18.0	19.8	250	2.0	3.2
CV1632	18.0	20.0	22.0	250	2.0	3.2
CV1634	19.8	22.0	24.2	250	2.0	3.2
CV1636	24.3	27.0	29.7	200	2.0	3.2
CV1638	29.7	33.0	36.3	200	2.0	3.2
CV1640	35.1	39.0	42.9	200	2.0	3.2
CV1642	42.3	47.0	51.7	200	2.0	3.2
CV1644	50.4	56.0	61.6	150	2.0	3.2
CV1646	61.2	68.0	74.8	150	2.0	3.2
CV1648	73.8	82.0	90.2	150	2.0	3.2
CV1650	90.0	100.0	110.0	150	2.0	3.2

TR, Tuning Ratio, is the ratio of C_T measured at 2 Vdc divided by C_T measured at 20 Vdc.