

VOLTAGE VARIABLE CAPACITANCE (TUNING) DIODES

PRODUCT HIGHLIGHTS		Very High Q Low Voltage Low Leakage				Very High Q Intermediate Voltage Low Leakage			High Q Low Voltage General Purpose			Low Voltage Low Leakage			High Voltage Low Leakage		
JEDEC Types		Device Type	CAP Ratio 2-30 V Min.	Q @4.0 V 50 MHz Min.	Device Type	CAP Ratio 2-40 V Min.	Q @4.0 V 50 MHz Min.	Device Type	CAP Ratio 2-30 V Min.	Q @4.0 V 50 MHz Min.	Device Type	CAP Ratio 0.1-4 V Min.	Max. Working Voltage (MWV)	Device Type	CAP Ratio 0.1-4 V Min.	Max. Working Voltage (MWV)	
Ct Nominal Capacitance pF +/- 10% Vr=4.0 V f=1.0 MHz	3.9	1N5458A	2.5	600				1N5440A	2.4	450							
	4.7	1N5459A	2.6	600													
	5.6	1N5460A	2.6	600													
	6.8	1N5461A	2.7	600	1N5681A	3.1	600	1N5441A	2.5	450	1N4786A	2.4	25	1N4801A	2.4	100	
	8.2	1N5462A	2.8	600	1N5682A	3.1	600	1N5442A	2.5	450	1N4787A	2.4	25	1N4802A	2.4	100	
	10	1N5463A	2.8	550	1N5683A	3.2	550	1N5443A	2.6	400	1N4788A	2.4	25	1N4803A	2.4	100	
	12	1N5464A	2.8	550	1N5684A	3.2	550	1N5444A	2.6	400	1N4789A	2.4	25	1N4804A	2.4	100	
	15	1N5465A	2.8	550	1N5685A	3.2	550	1N5445A	2.6	400	1N4790A	2.4	25	1N4805A	2.4	100	
	18	1N5466A	2.9	500	1N5686A	3.2	500	1N5446A	2.6	350	1N4791A	2.4	20	1N4806A	2.4	90	
	20	1N5467A	2.9	500				1N5447A	2.6	350							
	22	1N5468A	2.9	500	1N5687A	3.3	500	1N5448A	2.6	350	1N4792A	2.4	20	1N4807A	2.4	90	
	27	1N5469A	2.9	500	1N5688A	3.3	500	1N5449A	2.6	350	1N4793A	2.4	20	1N4808A	2.4	65	
	33	1N5470A	2.9	500	1N5689A	3.3	500	1N5450A	2.6	350	1N4794A	2.4	20	1N4809A	2.4	60	
	39	1N5471A	2.9	450	1N5690A	3.3	450	1N5451A	2.6	300	1N4795A	2.3	20	1N4810A	2.3	55	
	47	1N5472A	2.9	400	1N5691A	3.3	400	1N5452A	2.6	250	1N4796A	2.3	20	1N4811A	2.3	50	
	56	1N5473A	2.9	300	1N5692A	3.3	300	1N5453A	2.6	200	1N4797A	2.3	15	1N4812A	2.3	40	
	68	1N5474A	2.9	250	1N5693A	3.3	250	1N5454A	2.7	175	1N4798A	2.3	15	1N4813A	2.3	30	
	82	1N5475A	2.9	225	1N5694A	3.3	225	1N5455A	2.7	175	1N4799A	2.3	15	1N4814A	2.3	20	
	100	1N5476A	2.9	200	1N5695A	3.3	200	1N5456A	2.7	175	1N4800A	2.2	15	1N4815A	2.2	20	
Capacitance Tolerance		No suffix = 20%, A = 10%, B = 5%, C = 2%, D = 1%															

PRODUCT HIGHLIGHTS		High Q High Voltage Low Leakage			High Q High Voltage		
JEDEC Types		Device Type	CAP Ratio 4-60 V Min.	Q @4.0 V 50 MHz Min.	Device Type	CAP Ratio 4-60 V Min.	Q @4.0 V 50 MHz Min.
Ct Nominal Capacitance pF +/- 10% Vr=4.0 V f=1.0 MHz	3.9						
	4.7						
	5.6						
	6.8	1N5139	2.7	350	1N5696A	2.7	450
	8.2				1N5697A	2.7	450
	10	1N5140	2.8	300	1N5698A	2.8	400
	12	1N5141	2.8	300	1N5699A	2.8	400
	15	1N5142	2.8	250	1N5700A	2.8	400
	18	1N5143	2.8	250	1N5701A	2.9	375
	20						
	22	1N5144	3.2	200	1N5702A	3.2	375
	27	1N5145	3.2	200	1N5703A	3.2	350
	33	1N5146	3.2	200	1N5704A	3.2	350
	39	1N5147	3.2	200	1N5705A	3.2	325
	47	1N5148	3.2	200	1N5706A	3.2	300
	56				1N5707A	3.2	225
	68				1N5708A	3.2	175
	82				1N5709A	3.2	150
	100				1N5710A	3.2	150
Capacitance Tolerance		No suffix=10%, A=5%		No suffix=20%, B=5% C=2%, D=1%			

PRODUCT HIGHLIGHTS		Low Voltage General Purpose			High Q Low Voltage General Purpose		
ISI Types		Device Type	CAP Ratio 4-25 V Min.	Q @4.0 V 50 MHz Min.	Device Type	CAP Ratio 2-20 V Min.	Q @4.0 V 50 MHz Min.
Ct Nominal Capacitance pF +/- 10% Vr=4.0 V f=1.0 MHz	3.9						
	4.7						
	5.6						
	6.8				VVC1620	2.0	300
	7.0				VVC1622	2.0	300
	10				VVC1624	2.0	300
	12				VVC1626	2.0	300
	15	VVC733	1.8	30	VVC1628	2.0	250
	18	VVC736	1.8	25	VVC1630	2.0	250
	20				VVC1632	2.0	250
	22	VVC741	1.8	25	VVC1634	2.0	250
	27	VVC746	1.8	25	VVC1636	2.0	200
	33	VVC747	1.9	20	VVC1638	2.0	200
	39	VVC751	1.9	20	VVC1640	2.0	200
	47	VVC754	1.9	15	VVC1642	2.0	200
	56				VVC1644	2.0	150
	68	VVC759	2.0	15	VVC1646	2.0	150
	82	VVC763	2.0	10	VVC1648	2.0	150
	100	VVC766	2.0	10	VVC1650	2.0	150

Ct = Nominal Capacitance — Measure of the capacitance at one specified voltage.

Cr = Capacitance Ratio — Ratio of the capacitance at two separate voltages, usually operating ends of the CV curve.

Q = Figure Of Merit — The same figure of merit that is widely used for capacitors and coils and is an indicator of how "good" a capacitor the tuning diode is.

In-House Voltage Variable Capacitance (VVC) Diode Cross Reference Guide

Motorola	Teledyne Crystalonics	TRW	CODI Semiconductor	International Semiconductor
MV830-MV840	CV830-CV840		VVC738-VVC766	VVC738-VVC766
MV1620-MV1650	CV1620-CV1650		VVC1620-VVC1650	VVC1620-VVC1650
MV1866-MV1878	VS107-VS339	PG107-PG347	VVC1866-VVC1878	VVC1866-VVC1878
	V7E-V160E	V7E-V100E	VVC3276-VVC3288	VVC3276-VVC3288
	V900E-V982E	V900E-V982E	VVC3289-VVC3301	VVC3289-VVC3301
	V7-V100	V7-V100	VVC3302-VVC3314	VVC3302-VVC3314
	V900-V982	V900-V982	VVC3315-VVC3327	VVC3315-VVC3327
	VA107-VA173	PC107-PC141	VVC3328-VVC3347	VVC3328-VVC3347