

KNOX SEMICONDUCTOR, INC.

HF HYPERABRUPT TUNING DIODES

These hyperabrupt varactors are designed for use at frequencies up to 100 MHz. Their extremely high capacitance ratios provide frequency tuning up to 4:1. Linear performance is achieved between 1.5 and 4 volts. Diode capacitance values ranging from 46 to 350 pF are available. Matched sets are available for special applications.

LV1401 - LV1702

TYPE NUMBER	C _T CAPACITANCE (pF) f = 1 MHz						TR TUNING RATIO f = 1 MHz			Q		V _{BR} (Vdc) I _r = 10 μAdc	I _r (nAdc) V _R = 10 Vdc			
	V _R =1.25 Vdc		V _R =2 Vdc		V _R =7 Vdc		V _R =10Vdc		C•1.25V / C•7V		C•2V / C•10V		V _R = 2 Vdc		I _r = 10 μAdc	
	f=1 MHz		f=1 MHz		f=1 MHz		f=1 MHz		f=1 MHz		f=1 MHz		f=10 MHz		f=10 MHz	
	TYP	MIN	MAX	TYP	MIN	MAX	TYP	MIN	MAX	TYP	MIN	MAX	MIN / TYP	MIN / TYP	MIN	MAX
LV1401	81.5	46	68	6.1	4.2	5.2	13	10	17				75	140	12	50
LV1402	81.5	46	68	6.1	4.2	5.2	13	10	17	200	700				12	100
LV1501	180	100	150	13	8.6	10.6	14	10	17.5				50	130	12	50
LV1502	180	100	150	13	8.6	10.6	14	10	17.5	200	500				12	100
LV1601	255	140	210	18.5	12.6	15.4	14	10	17				50	120	12	50
LV1602	255	140	210	18.5	12.6	15.4	14	10	17	200	500				12	100
LV1701	325	180	270	24	16.2	19.8	14	10	17				50	115	12	50
LV1702	325	180	270	24	16.2	19.8	14	10	17	200	500				12	100

LV1801 - LV1802

TYPE NUMBER	C _T CAPACITANCE (pF) f = 1 MHz						TR TUNING RATIO f = 1 MHz			Q		V _{BR} (Vdc) I _r = 10 μAdc	I _r (nAdc) V _R = 10 Vdc			
	V _R =1.25 Vdc		V _R =2 Vdc		V _R =7 Vdc		C•1.25V / C•7V		C•2V / C•10V		V _R = 1.25 Vdc		f=1 MHz		f=10 MHz	
	MIN	MAX	TYP	MIN	MAX	TYP	MIN	MAX	TYP	MIN	MAX	MIN / TYP	MIN / TYP	MIN	MAX	
LV1801	450	550	350	30.5	37.5	26.5	12	18	13			30	70	12	100	
LV1802	450	550	350	30.5	37.5	26.5	12	18	13			150	300	12	200	

Package Style

Operating Temperature (Topr)

Storage Temperature (Tstg)

Other packages are available

DO-7

-55° to + 150°C

-65° to + 200°C