

UHF Hyperabrupt Tuning Varactors

Description

The **MicroMetrics** UHF Tuning Varactors offer higher Q's than their VHF counterparts, but have slightly lower capacitance ratios. These diodes are excellent for octave tuning up to 800 MHz and for straight-line-frequency tuning between 3 and 8 volts of bias. They also achieve exceptionally high Q values and large signal capabilities when tuned between 9 and 20 volts, which extends their useful range to over 1 GHz. Closely matched sets are available, designated by suffix "A".

Features

- High Reliability, Silicon Planar
- Octave Tuning at UHF
- Octave Tuning at VHF
- Straight-Line Frequency Applications over 3 to 8 Volt Bias Range
- Low Cost Applications

Packaging

- Hermetically Sealed

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Electrical Characteristics

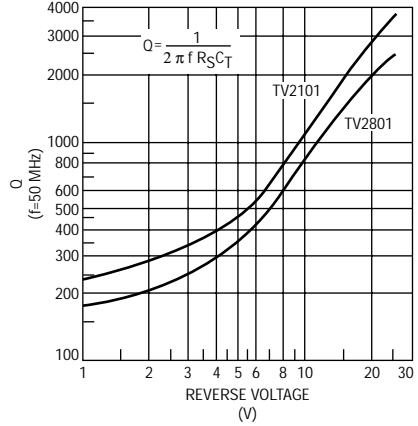
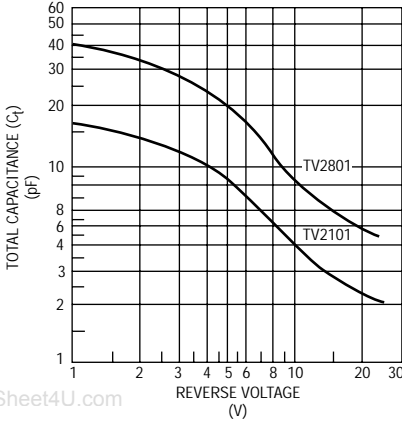
Total Capacitance, C_T^1 F = 1 MHz (pF)			Tuning Ratio T_T F = 1 MHz		
$V_T = 3$ Vdc MIN/MAX	$V_T = 8$ Vdc MIN/MAX	$V_T = 20$ Vdc MIN/MAX	C(3V)/C(20V) MIN/MAX	C(3V)/C(8V) MIN/MAX	
10.5/12.5	4.3/5.7	2.0/2.3	5.0/5.8	-	
10.9/12.1	4.6/5.4	2.0/2.3	5.0/5.8	-	
10.5/12.5	4.3/5.7	2.0/2.4	4.7/5.5	-	
10.9/12.1	4.6/5.4	2.0/2.4	4.7/5.5	-	
10.5/12.5	4.3/5.7	-	-	1.9/2.7	
10.9/12.1	4.6/5.4	-	-	2.0/2.6	
10.5/12.5	-	-	-	-	
25/31	10/13.5	4.5/5.1	5.2/6.1	-	
26.5/29.5	11/13	4.5/5.1	5.2/6.1	-	
25/31	10/13.5	4.5/5.3	4.9/5.8	-	
26.5/29.5	11/13	4.5/5.3	4.9/5.8	-	
25/31	10/13.5	-	-	1.9/2.8	
26.5/29.5	11/13	-	-	2.0/2.7	
25/31	-	-	-	-	

Notes:

1. Capacitance is measured in standard case style CS85.



Typical Performance



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Q V _r = 3 Vdc F = 50 MHz	V _{br} (Vdc) I _r = 10 μA dc	I _r (nA dc)			Part Number
		V _r = 6 Vdc TYP/MAX	V _r = 10 Vdc TYP/MAX	V _r = 20 Vdc TYP/MAX	
MIN/TYP	MIN/TYP				
300/350	22/30	-	-	10/100	TV2101
300/350	22/30	-	-	10/100	TV2101A
200/300	22/30	-	-	10/100	TV2102
200/300	22/30	-	-	10/100	TV2102A
200/300	15/18	-	50/500	-	TV2103
200/300	15/18	-	50/500	-	TV2103A
100/150	8/12	50/500	-	-	TV2104
200/250	22/30	-	-	20/100	TV2801
200/250	22/30	-	-	20/100	TV2801A
150/200	22/30	-	-	20/100	TV2802
150/200	22/30	-	-	20/100	TV2802A
150/200	15/18	-	50/500	-	TV2803
150/200	15/18	-	50/500	-	TV2803A
75/100	8/12	50/500	-	-	TV2804

Maximum Ratings

Parameter	Symbol	Value	Units
Reverse Voltage	V _r	Same as V _{br}	Volts
Forward Current	I _f	100	mA
Power Dissipation	P _d (25°C)	250	mW
Operating Temperature	T _{op}	-55 to + 150	°C
Storage Temperature	T _{stg}	-65 to + 200	°C

