

Coaxial

# Voltage Controlled Oscillator

ZX95-745+

5V Tuning for PLL IC's 710 to 745 MHz

## Features

- Linear tuning characteristics
- Low phase noise
- Low pushing
- Low pulling
- 0.5-5V tuning voltage range
- Protected by US patent 6,790,049



CASE STYLE: GB956

Connectors	Model	Price	Qty.
SMA	ZX95-745-S+	\$44.95 ea.	(1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

*The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.*

## Applications

- R&D
- LAB
- Instrumentation
- PLL circuitry
- Wireless microphones

## Electrical Specifications

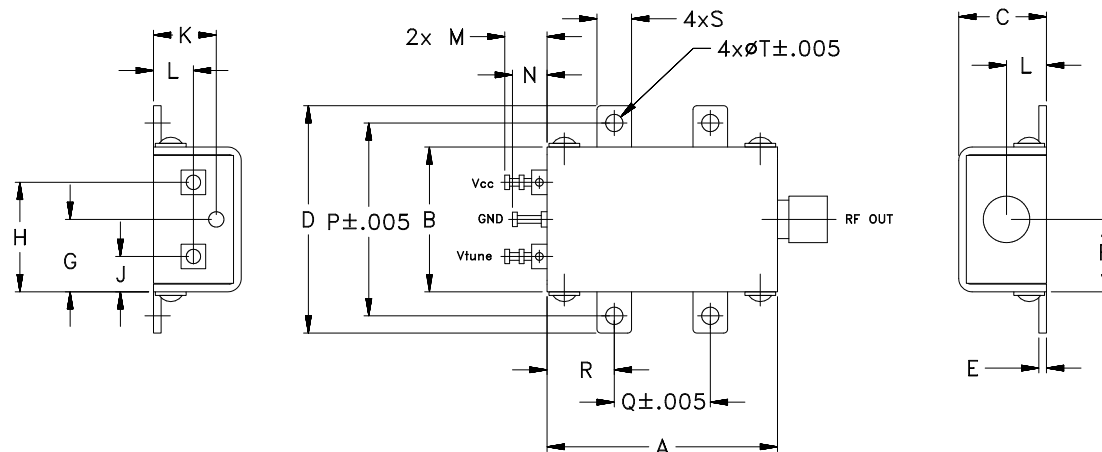
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, KHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.
ZX95-745+	710	745	+1	-88	-113	-133	-153	0.5	5	12	60	60	-90	-22	-14	0.8	0.3	5	17

## Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	WT.
1.20	.75	.46	1.18	.04	.38	.45	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	GRAM
30.48	19.05	11.68	29.97	1.02	9.65	11.43	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0



For detailed performance specs & shopping online see web site

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**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

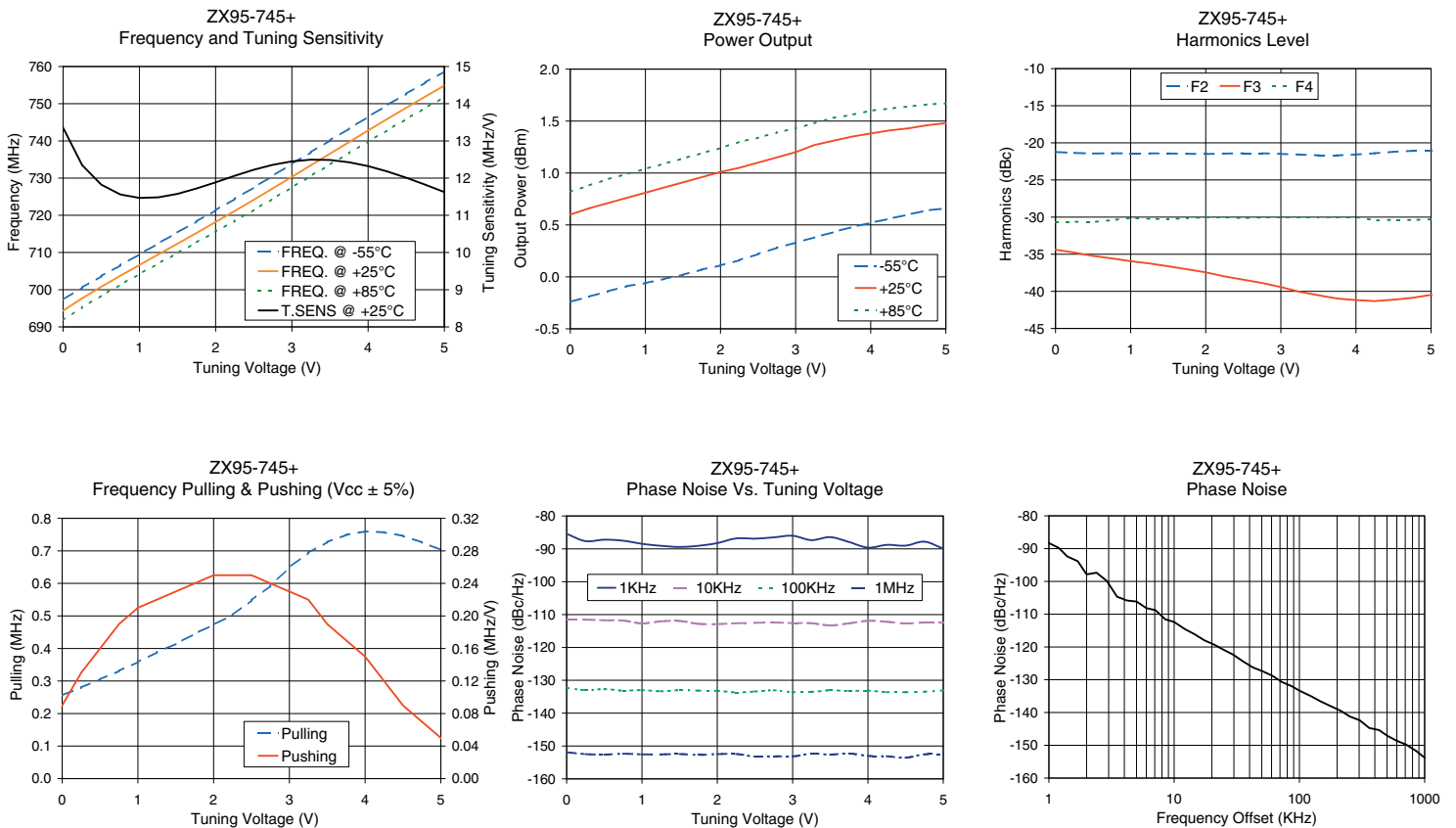
Rev. OR  
M108877  
EDR-7747/22  
ZX95-745+  
RAV  
090907  
page 1 of 2

# Performance Data & Curves\*

# ZX95-745+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (KHz)	PHASE NOISE at 717 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	13.35	697.3	694.4	691.8	-0.24	0.60	0.82	12.01	-21.2	-34.4	-30.6	0.09	0.26	-85.4	-111.5	-132.3	-151.9	1.0	-88.31
0.50	11.82	703.6	700.8	698.4	-0.14	0.71	0.94	12.06	-21.4	-35.2	-30.7	0.16	0.31	-87.2	-111.7	-132.7	-152.6	2.0	-97.87
0.75	11.56	706.6	703.7	701.3	-0.09	0.76	0.99	12.09	-21.4	-35.6	-30.4	0.19	0.33	-87.5	-111.8	-133.1	-152.4	3.5	-104.66
1.00	11.47	709.5	706.6	704.2	-0.06	0.81	1.04	12.11	-21.4	-35.9	-30.1	0.21	0.36	-88.5	-112.7	-133.0	-152.5	6.0	-108.15
1.25	11.48	712.4	709.5	707.0	-0.02	0.86	1.09	12.13	-21.4	-36.2	-30.2	0.22	0.39	-89.1	-112.1	-133.4	-152.5	8.5	-111.57
1.50	11.58	715.4	712.4	709.9	0.02	0.91	1.14	12.15	-21.4	-36.6	-30.3	0.23	0.41	-89.4	-112.0	-133.0	-152.4	10.0	-112.38
1.75	11.72	718.3	715.3	712.7	0.07	0.96	1.19	12.18	-21.5	-37.0	-30.1	0.24	0.45	-89.1	-112.8	-133.1	-152.7	20.8	-119.26
2.00	11.89	721.4	718.2	715.6	0.11	1.01	1.24	12.20	-21.5	-37.4	-30.0	0.25	0.47	-88.3	-112.9	-133.2	-152.5	35.5	-124.41
2.25	12.06	724.4	721.2	718.5	0.16	1.05	1.30	12.23	-21.4	-38.0	-30.0	0.25	0.50	-86.8	-112.7	-133.7	-152.4	60.7	-128.78
2.50	12.22	727.5	724.2	721.5	0.22	1.10	1.34	12.25	-21.4	-38.4	-30.1	0.25	0.55	-86.9	-112.5	-133.4	-153.2	86.7	-131.94
2.75	12.36	730.6	727.2	724.5	0.28	1.15	1.39	12.27	-21.4	-38.9	-30.0	0.24	0.59	-86.5	-112.4	-133.1	-153.1	100.0	-133.33
3.00	12.45	733.8	730.3	727.5	0.33	1.20	1.43	12.29	-21.5	-39.4	-30.0	0.23	0.65	-86.0	-112.6	-133.6	-153.2	148.1	-136.63
3.25	12.50	737.0	733.4	730.6	0.38	1.27	1.48	12.32	-21.6	-40.1	-30.0	0.22	0.69	-87.4	-112.6	-133.5	-152.3	177.0	-138.01
3.50	12.49	740.1	736.6	733.7	0.43	1.31	1.53	12.35	-21.7	-40.5	-30.1	0.19	0.73	-86.4	-113.3	-133.1	-152.6	211.6	-139.39
3.75	12.43	743.3	739.7	736.7	0.48	1.35	1.56	12.37	-21.7	-41.0	-30.0	0.17	0.75	-87.9	-112.7	-133.3	-152.3	302.4	-142.36
4.00	12.32	746.5	742.8	739.8	0.52	1.38	1.60	12.39	-21.6	-41.2	-30.0	0.15	0.76	-89.6	-111.9	-133.2	-153.0	361.5	-144.73
4.25	12.18	749.6	745.9	742.9	0.56	1.41	1.62	12.40	-21.4	-41.3	-30.5	0.12	0.76	-88.8	-112.2	-133.6	-153.1	507.5	-147.17
4.50	12.01	752.7	748.9	745.9	0.60	1.43	1.64	12.42	-21.2	-41.1	-30.4	0.09	0.75	-89.0	-112.7	-133.6	-153.6	600.0	-148.61
4.75	11.82	755.7	751.9	748.9	0.64	1.46	1.66	12.43	-21.1	-40.9	-30.4	0.07	0.73	-87.8	-112.4	-133.5	-152.5	851.6	-151.68
5.00	11.62	758.7	754.9	751.8	0.66	1.48	1.67	12.44	-21.1	-40.5	-30.3	0.05	0.70	-89.8	-112.4	-133.1	-152.5	1000.0	-153.77

\*at 25°C unless mentioned otherwise



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