

Coaxial

# NON-CATALOG

# Voltage Controlled Oscillator

## ZX95-4635+

Linear Tuning 4460 to 4635 MHz

### Features

- low phase noise
- low pulling
- low pushing
- protected by US patent 6,790,049

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- radio link



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-4635-S+

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Electrical Specifications

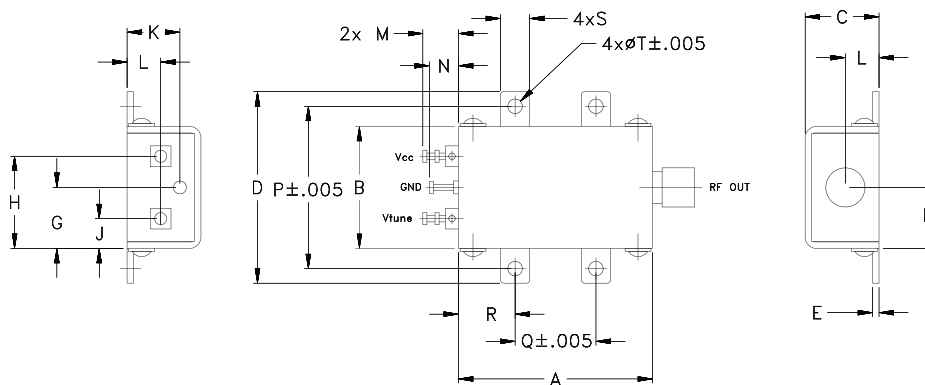
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)		PORT SENSITIVITY (MHz/V)	CAP MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.	Max.	Vcc (volts)	Current (mA)
									Min.	Max.												
ZX95-4635+	4460	4635	+3.0	-68	-96	-117	-137	0.5	6	30-65	13	120	-90	-20	-10	1.3	2	5	48			

### Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	6V
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	.38	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	9.65	9.65	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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

**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. B  
M137599  
EDR-9054/1MPF1  
ZX95-4635+  
RAV  
120723  
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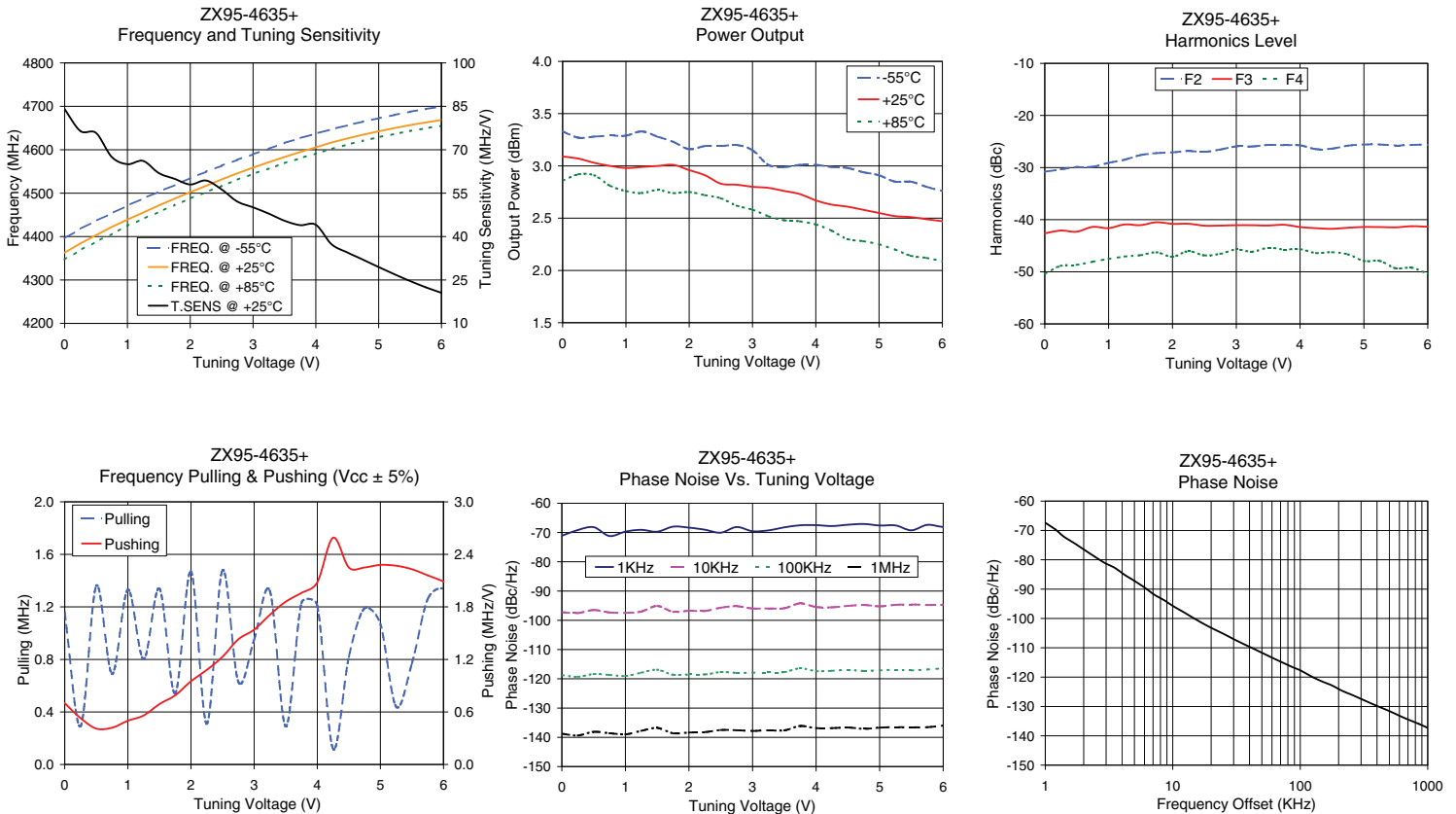
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## Performance Data & Curves\*

## ZX95-4635+

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 4548 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	84.02	4395.8	4363.1	4347.1	3.33	3.09	2.86	41.23	-30.8	-42.6	-50.4	0.70	1.16	-71.1	-97.3	-118.8	-138.8	1.0	-67.39
0.50	75.80	4436.2	4403.2	4388.2	3.28	3.03	2.91	41.27	-29.9	-42.3	-48.7	0.41	1.36	-68.2	-96.5	-118.4	-138.1	2.0	-76.46
1.00	65.01	4471.3	4439.0	4424.5	3.29	2.98	2.76	41.36	-29.1	-41.6	-47.5	0.50	1.33	-69.7	-97.5	-119.1	-139.0	3.5	-82.74
1.25	66.14	4487.6	4455.3	4440.9	3.33	2.99	2.74	41.37	-28.5	-40.9	-47.1	0.56	0.80	-69.1	-97.0	-117.9	-137.8	6.0	-89.44
1.50	61.92	4503.3	4471.8	4456.6	3.28	3.00	2.77	41.37	-27.6	-41.1	-46.8	0.69	1.34	-69.7	-95.1	-116.9	-136.8	8.5	-93.71
1.75	59.94	4518.4	4487.3	4472.5	3.23	3.01	2.74	41.39	-27.2	-40.5	-46.3	0.79	0.54	-68.0	-97.1	-118.6	-138.6	10.0	-95.70
2.00	58.00	4534.9	4502.3	4487.7	3.16	2.96	2.75	41.39	-27.1	-40.8	-47.1	0.95	1.47	-68.3	-96.8	-118.5	-138.4	20.8	-103.55
2.50	56.27	4563.2	4531.6	4516.6	3.19	2.83	2.69	41.35	-27.0	-41.2	-46.9	1.23	1.48	-70.1	-95.7	-117.7	-137.5	35.5	-108.59
3.00	50.12	4589.6	4558.7	4544.4	3.15	2.80	2.58	41.37	-25.9	-41.1	-45.7	1.54	0.95	-69.6	-96.0	-117.9	-137.8	60.7	-113.46
3.50	45.46	4615.5	4583.2	4569.0	2.99	2.76	2.48	41.32	-25.7	-41.1	-45.4	1.86	0.29	-68.2	-95.9	-117.7	-137.6	86.7	-116.57
3.75	43.94	4626.7	4594.6	4580.5	3.01	2.73	2.47	41.29	-25.7	-41.0	-45.7	1.96	1.23	-67.5	-94.2	-116.4	-136.1	100.0	-117.68
4.00	44.06	4637.3	4605.6	4591.3	3.01	2.67	2.44	41.24	-25.7	-41.4	-45.7	2.08	1.21	-67.5	-95.5	-117.4	-136.9	148.1	-121.47
4.25	37.35	4647.1	4616.6	4601.7	2.99	2.63	2.38	41.23	-26.5	-41.6	-46.4	2.59	0.12	-67.8	-95.6	-117.3	-136.9	177.0	-122.82
4.50	34.54	4656.3	4625.9	4611.8	2.98	2.61	2.30	41.23	-26.4	-41.8	-46.2	2.25	0.82	-67.3	-95.1	-117.0	-136.7	211.6	-124.60
4.75	32.01	4664.8	4634.6	4620.8	2.94	2.58	2.28	41.21	-25.8	-41.6	-46.7	2.25	1.19	-67.1	-94.8	-117.3	-137.1	302.4	-127.50
5.00	29.47	4672.6	4642.6	4628.9	2.91	2.55	2.25	41.19	-25.6	-41.4	-47.9	2.28	1.07	-67.6	-95.3	-117.1	-136.7	361.5	-128.99
5.25	26.99	4680.1	4649.9	4636.4	2.85	2.52	2.20	41.16	-25.6	-41.4	-47.9	2.27	0.44	-67.6	-94.7	-116.9	-136.5	507.5	-131.70
5.50	24.62	4687.6	4656.7	4643.2	2.85	2.51	2.14	41.14	-25.8	-41.5	-49.3	2.23	0.77	-69.2	-94.6	-117.1	-136.6	606.7	-133.27
5.75	22.48	4693.8	4662.8	4649.5	2.80	2.49	2.12	41.11	-25.7	-41.3	-49.2	2.16	1.26	-67.4	-94.8	-116.8	-136.5	851.6	-135.94
6.00	20.57	4699.3	4668.5	4655.2	2.76	2.47	2.09	41.09	-25.6	-41.3	-50.3	2.09	1.34	-68.1	-94.7	-116.4	-136.0	1000.0	-137.30

\*at 25°C unless mentioned otherwise



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