

2-Fundamental

Voltage Controlled Oscillator

ZX95-4725-S+

Frequency Doubling 4585 to 4725 MHz

Features

- frequency based on multiplication of carrier frequency
- low phase noise
- low pulling & pushing
- 5V tuning voltage range
- protected by US patent 6,790,049



Generic photo used for illustration purposes only
CASE STYLE: GB956

Connectors	Model
SMA	ZX95-4725-S+

Applications

- r & d
- lab
- instrumentation
- wireless communications
- point-to-point radio

+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		
	F 2X(1/2F)			Typ.				VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Max.					Vcc (volts)	Current (mA)	
	Min.	Max.		Typ.	1	10	100						1000	Min.	Max.					Typ.
ZX95-4725-S+	4585	4725	+1.5	-74	-104	-125	-145	0.5	5	70-97	23	110	-90	-25	-14	-15	2	3.5	5	30

Maximum Ratings

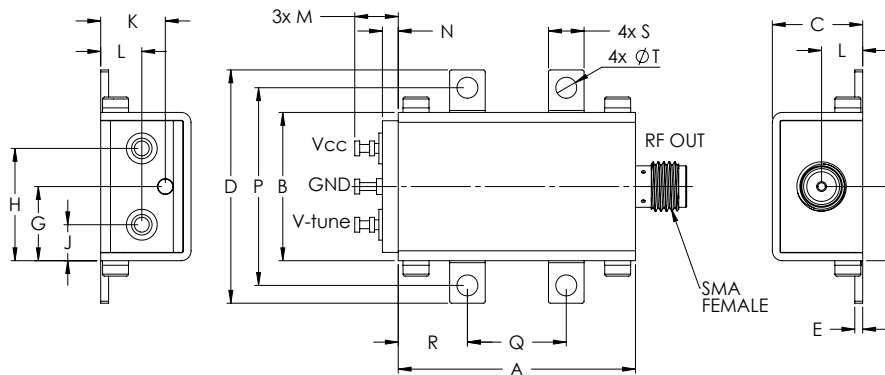
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7V
Absolute Max. Tuning Voltage (Vtune)	7V
All specifications	50 ohm system

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



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

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	.08	1.00	.50	.35	.18	.106	grams
30.48	19.15	11.61	30.07	1.02	9.53	9.53	14.43	4.62	8.31	5.28	5.59	2.03	25.40	12.70	8.89	4.57	2.69	35.0

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document 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

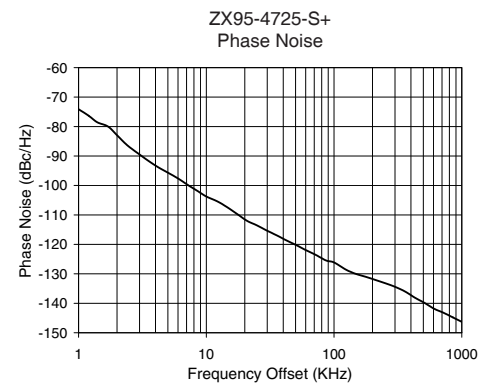
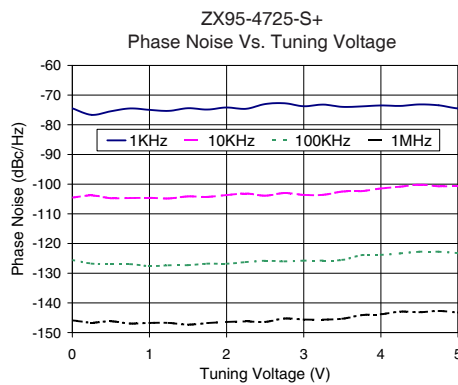
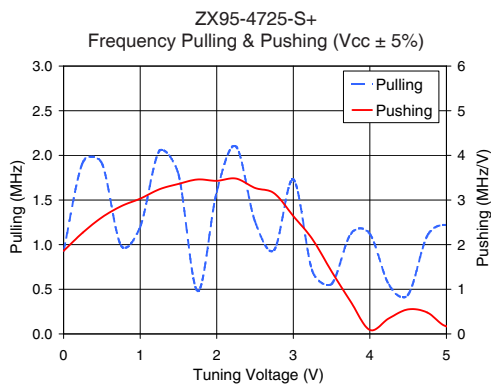
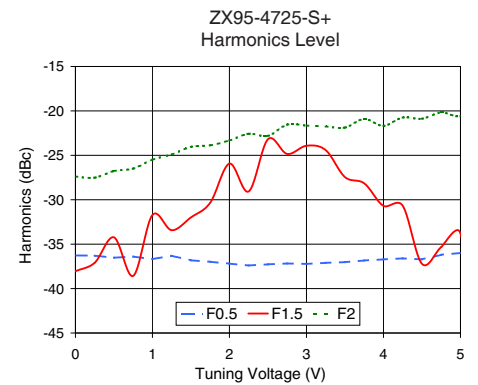
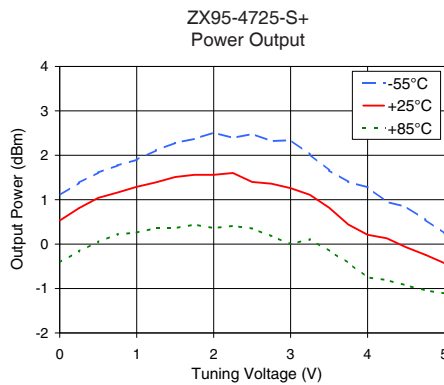
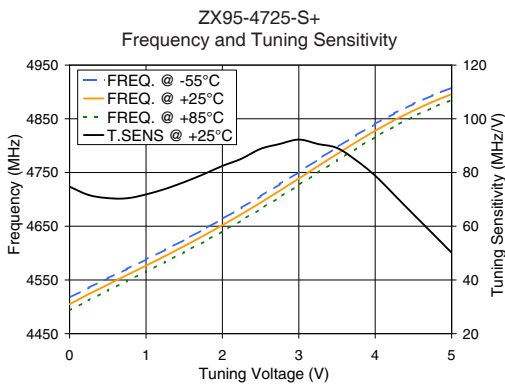


Performance Data & Curves*

ZX95-4725-S+

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 4655 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F0.5	F1.5	F2			1kHz	10kHz	100kHz	1MHz		
0.00	74.72	4517.1	4504.7	4493.0	1.10	0.53	-0.41	19.55	-36.3	-38.1	-27.4	1.86	0.93	-74.5	-104.5	-125.5	-145.9	1.0	-74.12
0.25	71.65	4535.3	4523.4	4512.2	1.38	0.81	-0.16	19.66	-36.3	-37.1	-27.5	2.27	1.92	-76.7	-103.8	-126.8	-146.7	2.0	-82.95
0.50	70.46	4553.0	4541.3	4530.2	1.61	1.04	0.05	19.75	-36.5	-34.2	-26.8	2.61	1.91	-75.4	-104.7	-126.9	-146.2	3.5	-91.57
0.75	70.42	4570.4	4559.0	4547.9	1.77	1.16	0.22	19.81	-36.4	-38.6	-26.5	2.86	0.99	-74.5	-104.7	-126.9	-147.0	6.0	-97.62
1.00	71.84	4588.0	4576.6	4565.6	1.90	1.29	0.26	19.84	-36.7	-31.7	-25.5	3.03	1.20	-75.0	-104.6	-127.6	-146.8	8.5	-101.82
1.25	73.89	4606.0	4594.5	4583.5	2.11	1.39	0.36	19.84	-36.3	-33.4	-24.9	3.24	2.05	-75.3	-104.8	-127.4	-146.8	10.0	-103.74
1.50	76.44	4624.5	4613.0	4601.8	2.28	1.51	0.36	19.83	-36.8	-32.0	-24.1	3.36	1.79	-74.4	-104.1	-127.3	-147.3	20.8	-111.99
1.75	79.31	4643.7	4632.1	4620.8	2.37	1.56	0.44	19.79	-37.0	-30.3	-23.9	3.46	0.48	-74.9	-104.3	-126.8	-146.8	35.5	-116.90
2.00	82.43	4663.6	4651.9	4640.5	2.51	1.56	0.36	19.73	-37.2	-25.9	-23.3	3.43	1.59	-74.2	-103.7	-126.8	-146.4	60.7	-122.02
2.25	85.13	4684.4	4672.5	4660.9	2.39	1.60	0.41	19.67	-37.4	-29.1	-22.6	3.48	2.10	-74.6	-103.2	-126.3	-146.2	86.7	-125.45
2.50	88.81	4705.9	4693.8	4682.2	2.48	1.40	0.35	19.59	-37.3	-23.2	-22.8	3.27	1.26	-73.0	-103.9	-125.8	-146.4	100.0	-126.14
2.75	90.62	4728.3	4716.0	4704.0	2.32	1.36	0.18	19.50	-37.2	-24.8	-21.6	3.15	0.94	-72.7	-103.0	-126.0	-145.3	148.1	-130.03
3.00	92.26	4751.0	4738.7	4726.8	2.34	1.26	0.00	19.41	-37.2	-23.9	-21.7	2.64	1.73	-73.8	-103.6	-125.8	-145.6	177.0	-131.01
3.25	90.63	4774.1	4761.7	4749.7	2.02	1.11	0.11	19.32	-37.1	-24.4	-21.8	2.12	0.70	-73.2	-103.6	-125.7	-145.7	211.6	-132.10
3.50	89.14	4797.0	4784.4	4772.6	1.66	0.82	-0.15	19.23	-37.0	-27.5	-21.9	1.40	0.56	-74.0	-102.5	-125.5	-145.4	302.4	-134.47
3.75	84.56	4819.3	4806.7	4794.8	1.40	0.44	-0.42	19.16	-36.8	-28.2	-20.9	0.72	1.12	-73.8	-102.4	-123.9	-144.1	361.5	-136.07
4.00	78.82	4840.5	4827.8	4816.2	1.28	0.21	-0.75	19.09	-36.7	-30.7	-21.7	0.09	1.12	-73.5	-101.5	-123.8	-143.8	507.5	-139.79
4.25	71.66	4860.1	4847.5	4836.1	0.95	0.13	-0.81	19.05	-36.6	-30.7	-20.8	0.35	0.55	-73.6	-100.9	-123.3	-142.9	606.7	-141.86
4.50	64.46	4877.9	4865.4	4854.3	0.84	-0.07	-0.93	19.00	-36.7	-37.2	-20.9	0.55	0.44	-73.1	-100.2	-122.8	-143.2	851.6	-144.77
5.00	50.19	4907.9	4895.9	4885.4	0.24	-0.43	-1.11	18.91	-36.0	-33.8	-20.6	0.17	1.22	-74.5	-100.7	-123.2	-143.2	1000.0	-146.30

*at 25°C unless mentioned otherwise



Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document 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

