

Coaxial

Voltage Controlled Oscillator

ZX95-4540-S+

5V Tuning for PLL ICs 4340 to 4540 MHz

Features

- linear tuning characteristics
- very low pushing
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- wireless communications
- WiMAX 5.9 GHz



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-4540-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 Typ.				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
								VOLTAGE RANGE (V)	SENSI- TIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)	Vcc						Current (mA)	
	Min.	Max.	Typ.	1	10	100	1000	Min.	Max.	Typ.	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Typ.	Max.	
ZX95-4540-S+	4340	4540	+5	-68	-93	-117	-137	0.5	4.5	53-85	14	140	-90	-28	-18	3.5	4	5	45

Maximum Ratings

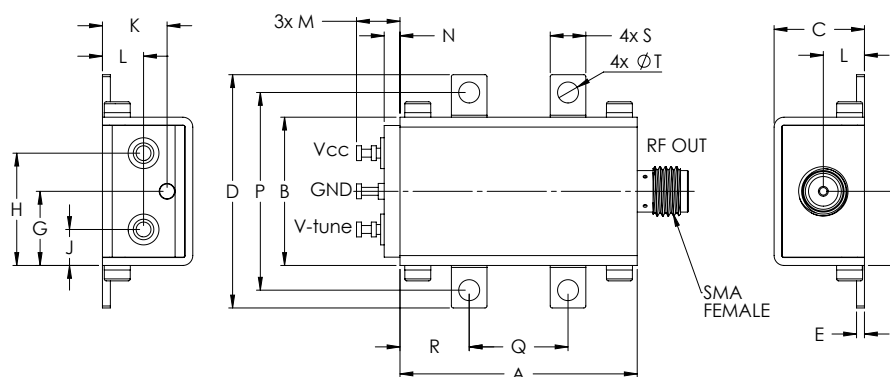
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	7.0V
Absolute Max. Tuning Voltage (Vtune)	6.5V
All specifications	50 ohm system

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	19.05	11.68	29.97	1.02	9.65	9.65	14.48	4.57	8.38	5.33	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



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

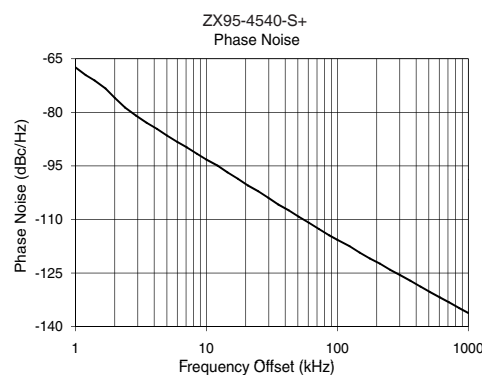
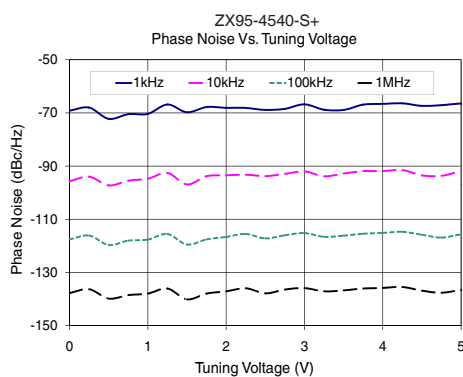
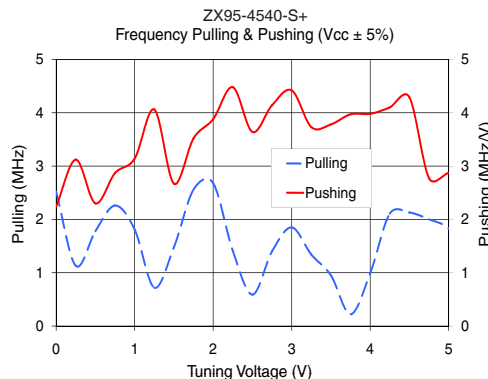
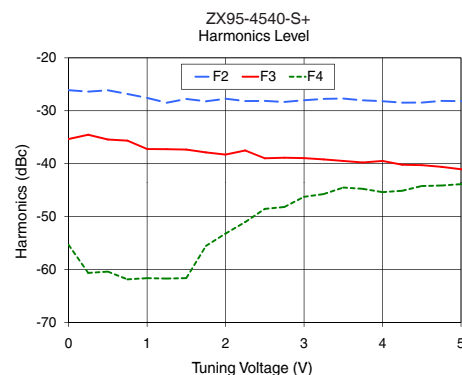
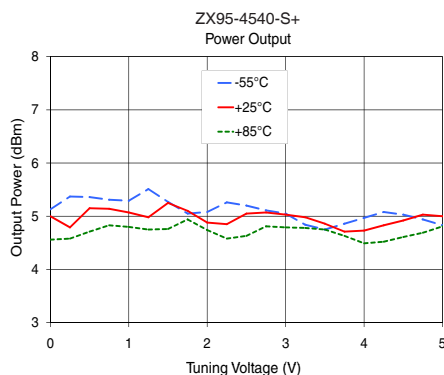
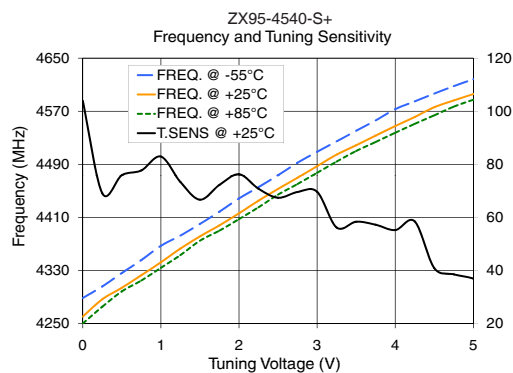
REV. C
 M172028
 EDR-10084/2MPF1
 ZX95-4540-S+
 MCL/RAV
 190128
 Page 1 of 2

Performance Data & Curves*

ZX95-4540-S+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			I _{cc} (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 4440 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	103.93	4288.6	4260.8	4250.2	5.13	5.00	4.56	36.01	-26.1	-35.3	-55.3	2.24	2.52	-69.15	-95.7	-117.6	-137.8	1.0	-67.39
0.25	69.10	4306.1	4286.8	4275.6	5.37	4.79	4.58	36.07	-26.4	-34.5	-60.6	3.12	1.13	-67.98	-94.0	-116.1	-136.3	2.0	-75.96
0.50	75.91	4326.2	4304.0	4298.6	5.36	5.15	4.71	36.31	-26.1	-35.4	-60.4	2.30	1.78	-72.23	-97.3	-119.7	-139.8	3.5	-82.93
0.75	77.72	4345.8	4323.0	4315.0	5.31	5.14	4.83	36.26	-26.8	-35.6	-61.9	2.87	2.26	-70.48	-95.5	-118.0	-138.5	6.0	-88.30
1.00	82.96	4367.3	4342.4	4334.1	5.29	5.07	4.80	36.22	-27.6	-37.2	-61.6	3.14	1.81	-70.36	-94.7	-117.6	-137.9	8.5	-91.62
1.25	73.35	4382.7	4363.2	4353.3	5.51	4.98	4.75	36.16	-28.5	-37.3	-61.7	4.06	0.72	-66.84	-92.6	-115.5	-136.0	10.0	-93.21
1.50	66.68	4400.3	4381.5	4375.0	5.27	5.25	4.76	36.36	-27.8	-37.3	-61.6	2.67	1.48	-69.76	-96.9	-119.5	-140.1	20.8	-100.50
1.75	72.27	4418.7	4398.2	4390.2	5.05	5.10	4.94	36.33	-28.2	-37.9	-55.5	3.52	2.56	-67.80	-93.8	-117.6	-138.0	35.5	-105.82
2.00	76.28	4438.6	4416.3	4407.5	5.08	4.88	4.74	36.28	-27.7	-38.3	-53.2	3.88	2.68	-68.09	-93.5	-116.6	-137.1	60.7	-110.91
2.25	70.81	4455.7	4435.3	4425.4	5.26	4.85	4.58	36.23	-28.2	-37.5	-51.0	4.48	1.41	-68.13	-93.3	-115.5	-136.0	86.7	-114.43
2.50	67.42	4473.7	4453.0	4444.4	5.20	5.05	4.63	36.31	-28.1	-39.0	-48.6	3.64	0.59	-68.87	-93.8	-117.2	-137.9	100.0	-115.68
2.75	69.58	4492.5	4469.9	4460.5	5.11	5.07	4.81	36.30	-28.3	-38.9	-48.2	4.14	1.40	-68.46	-92.9	-116.0	-136.4	148.1	-119.27
3.00	69.66	4509.0	4487.3	4477.2	5.05	5.03	4.79	36.30	-28.0	-39.0	-46.3	4.42	1.85	-66.79	-92.0	-115.2	-135.9	177.0	-120.90
3.25	56.21	4524.7	4504.7	4494.3	4.84	4.98	4.78	36.40	-27.8	-39.2	-45.7	3.73	1.34	-68.79	-93.8	-116.6	-137.1	211.6	-122.36
3.50	58.39	4540.6	4518.7	4510.2	4.75	4.86	4.75	36.48	-27.7	-39.5	-44.5	3.78	0.95	-68.89	-92.8	-116.2	-136.7	302.4	-125.59
3.75	57.25	4556.2	4533.3	4523.7	4.86	4.71	4.63	36.50	-28.0	-39.8	-44.8	3.97	0.22	-66.89	-91.9	-115.4	-136.0	361.5	-127.15
4.00	55.25	4573.1	4547.6	4537.6	4.97	4.73	4.49	36.53	-28.2	-39.5	-45.4	3.98	0.99	-66.61	-91.9	-115.1	-135.8	507.5	-130.25
4.25	58.50	4584.9	4561.5	4551.0	5.08	4.83	4.52	36.55	-28.5	-40.2	-45.1	4.10	2.11	-66.41	-91.5	-114.7	-135.5	606.7	-131.80
4.50	40.89	4596.6	4576.1	4563.9	5.03	4.92	4.61	36.61	-28.5	-40.3	-44.2	4.29	2.13	-67.35	-93.5	-115.8	-136.9	851.6	-134.81

*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-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

