

Coaxial

# Voltage Controlled Oscillator

## ZX95-928CA+

Ultra Low Noise 902 to 928 MHz

### Features

- ultra low phase noise
- linear tuning characteristics
- low pulling & pushing
- protected by US patent 6,790,049

### Applications

- r & d
- lab
- instrumentation
- wireless communications
- industrial communications
- RFID



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-928CA-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)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Max.	Typ.
ZX95-928CA+	902	928	+4.6	-92	-120	-141	-161	0.5	10	6	22	90	-90	-20	-15	0.4	0.3	8	35

### Maximum Ratings

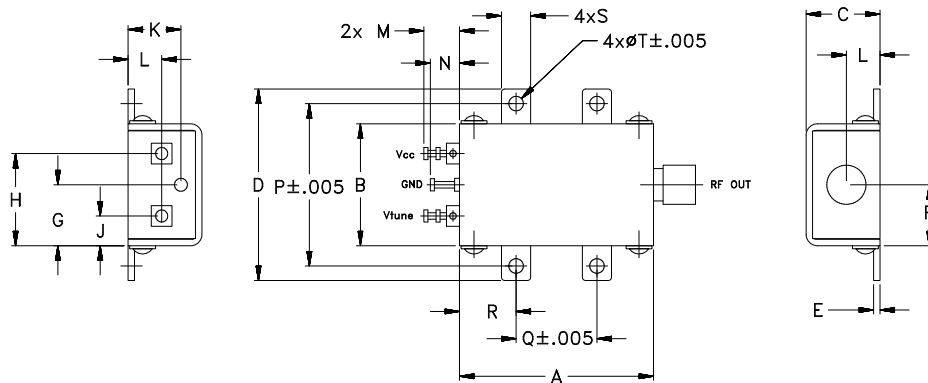
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	8.5V
Absolute Max. Tuning Voltage (Vtune)	12.0V
All specifications	50 ohm system

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	.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

#### Notes

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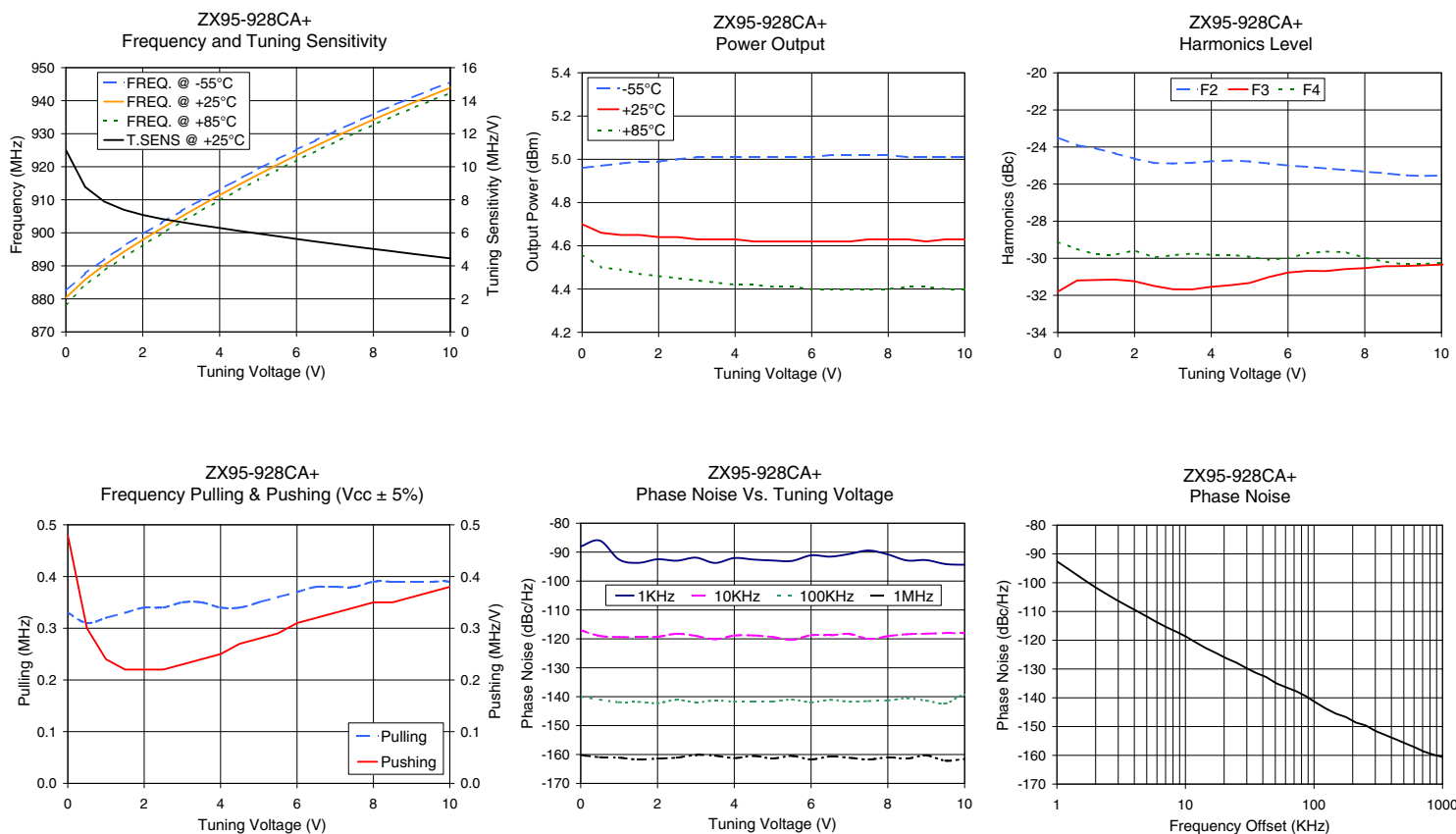
REV. A  
M152326  
EDR-9226F2  
ZX95-928CA+  
RAV  
150923  
Page 1 of 2

# Performance Data & Curves\*

# ZX95-928CA+

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 915 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	11.02	882.4	880.3	878.3	4.96	4.70	4.56	27.65	-23.5	-31.8	-29.1	0.48	0.33	-88.0	-117.0	-140.0	-160.2	1.0	-92.60
1.00	7.89	892.0	890.2	888.6	4.98	4.65	4.49	27.74	-24.1	-31.2	-29.8	0.24	0.32	-92.6	-119.4	-141.9	-161.1	2.0	-101.66
1.50	7.40	895.9	894.2	892.6	4.99	4.65	4.47	27.77	-24.4	-31.2	-29.8	0.22	0.33	-93.7	-119.4	-141.8	-161.7	3.5	-108.00
2.00	7.08	899.6	897.9	896.3	4.99	4.64	4.46	27.80	-24.6	-31.2	-29.6	0.22	0.34	-92.5	-119.3	-142.2	-161.4	6.0	-113.74
2.50	6.84	903.2	901.4	899.8	5.00	4.64	4.45	27.82	-24.9	-31.5	-30.0	0.22	0.34	-93.0	-118.2	-141.1	-161.1	8.5	-117.06
3.00	6.65	906.6	904.8	903.3	5.01	4.63	4.44	27.85	-24.9	-31.7	-29.8	0.23	0.35	-91.9	-119.0	-141.9	-160.2	10.0	-118.62
3.50	6.46	909.9	908.2	906.6	5.01	4.63	4.43	27.88	-24.9	-31.7	-29.7	0.24	0.35	-93.7	-120.1	-141.3	-160.4	20.8	-126.28
4.00	6.29	913.1	911.4	909.8	5.01	4.63	4.42	27.90	-24.8	-31.5	-29.8	0.25	0.34	-92.0	-118.9	-141.7	-161.2	35.5	-131.38
4.50	6.12	916.2	914.5	913.0	5.01	4.62	4.42	27.93	-24.7	-31.5	-29.8	0.27	0.34	-92.6	-118.8	-141.7	-160.5	60.7	-136.37
5.00	5.95	919.3	917.6	916.0	5.01	4.62	4.41	27.96	-24.8	-31.3	-29.9	0.28	0.35	-92.9	-119.4	-141.7	-161.4	86.7	-139.47
5.50	5.79	922.3	920.6	919.0	5.01	4.62	4.41	27.98	-24.9	-31.0	-30.1	0.29	0.36	-93.0	-120.3	-141.0	-160.5	100.0	-141.30
6.00	5.63	925.2	923.5	921.9	5.01	4.62	4.40	28.01	-25.0	-30.8	-30.0	0.31	0.37	-91.1	-118.7	-141.9	-161.7	148.1	-145.52
6.50	5.47	928.0	926.3	924.7	5.02	4.62	4.40	28.03	-25.1	-30.7	-29.7	0.32	0.38	-91.6	-118.8	-141.1	-160.7	177.0	-146.69
7.00	5.32	930.7	929.0	927.5	5.02	4.62	4.40	28.06	-25.2	-30.7	-29.6	0.33	0.38	-90.6	-118.3	-141.7	-161.1	211.6	-148.61
7.50	5.17	933.4	931.7	930.1	5.02	4.63	4.40	28.08	-25.2	-30.6	-29.7	0.34	0.38	-89.4	-120.1	-141.5	-161.7	302.4	-151.60
8.00	5.02	936.0	934.3	932.7	5.02	4.63	4.40	28.11	-25.3	-30.5	-30.0	0.35	0.39	-90.8	-119.1	-141.3	-161.0	361.5	-153.01
8.50	4.88	938.5	936.8	935.2	5.01	4.63	4.41	28.13	-25.4	-30.4	-30.2	0.35	0.39	-92.9	-118.4	-140.6	-161.4	507.5	-155.75
9.00	4.73	940.9	939.2	937.7	5.01	4.62	4.41	28.15	-25.5	-30.4	-30.3	0.36	0.39	-92.8	-118.2	-141.4	-160.3	606.7	-157.19
9.50	4.59	943.3	941.6	940.0	5.01	4.63	4.40	28.17	-25.6	-30.4	-30.3	0.37	0.39	-94.1	-118.0	-142.3	-162.1	851.6	-159.80
10.00	4.45	945.6	943.9	942.3	5.01	4.63	4.40	28.20	-25.5	-30.3	-30.2	0.38	0.39	-94.4	-118.0	-139.4	-161.6	1000.0	-160.58

\*at 25°C unless mentioned otherwise



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