

## PRODUCT CHANGE NOTICE

### PCN Form (D4-E000-73)

**PCN#18-040**

**NOTIFICATION DATE: April 6, 2018**

#### **MODEL(S) AFFECTED:**

**ROS-3250-519+**  
**ZX95-3250-S+**

#### **EXTENT OF CHANGE:**

1. Replacement of supplied transistor and varactor diode based on discontinuation of supply with alternate, qualified components.
2. Change of internal component values to optimize replacement parts

#### **EFFECT OF CHANGE:**

No change in FIT or FORM

Shift in performance and changes in specification per table below:

Parameters	Original Performance	Original spec	New Performance	New Spec
Sensitivity	25.8 to 45.8 MHz/V	22-44 MHz/V Typ	32.9 to 50.4 MHz/V	30-50 MHz/V Typ
Ph. N @ 1kHz	-78.6 to -74.9 dBc/Hz	-73 dBc/Hz Typ	-73.6 to -68.1 dBc/Hz	-70 dBc/Hz Typ
Ph. N @ 10kHz	-100.5 to -99.1 dBc/Hz	-98 dBc/Hz Typ	-97.5 to -94.5 dBc/Hz	-96 dBc/Hz Typ
Ph. N @ 100kHz	-121.4 to -119.8 dBc/Hz	-119 dBc/Hz Typ	-119.8 to -115.7 dBc/Hz	-118 dBc/Hz Typ

No change in internal or external layout.

#### **REASON FOR CHANGE:**

Obsolescence of supplied components

#### **EFFECTIVE DATE OF CHANGE:**

Immediate, pending stock depletion

For **ROS-3250-519+**, last date code of old design is **DC 1745**

For **ZX95-3250-S+**, availability of the new configuration will depend on stock conditions.

#### **ATTACHMENTS:**

Updated Datasheets of ROS-3250-519+ & ZX95-3250-S+  
(Data available to support the change)

**QUESTIONS?**

**[PLEASE CONTACT US.](#)**

Updated 2/21/19 due to stock conditions

## PRODUCT CHANGE NOTICE

### PCN Form (D4-E000-73)

Surface Mount

# Voltage Controlled Oscillator

## ROS-3250-519+

Linear Tuning 2550 to 3250 MHz



CASE STYLE: CK605

#### Features

- low phase noise
- low pulling
- low pushing
- Aqueous washable

#### Applications

- wireless communication
- 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			
	Min.	Max.		Typ.				VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Typ.	Vcc	Current
				1	10	100	1000	Min.	Max.	Typ.	Typ.		Typ.	Typ.			Max.	Typ.	Max.	
ROS-3250-519+	2550	3250	+2.5	-70	-96	-118	-139	0.5	24	30-50	35	160	-90	-20	-12	0.6	3	5	42	

#### Pin Connections

RF OUT	10
VCC	14
V-TUNE	2
GROUND	1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16

#### Maximum Ratings

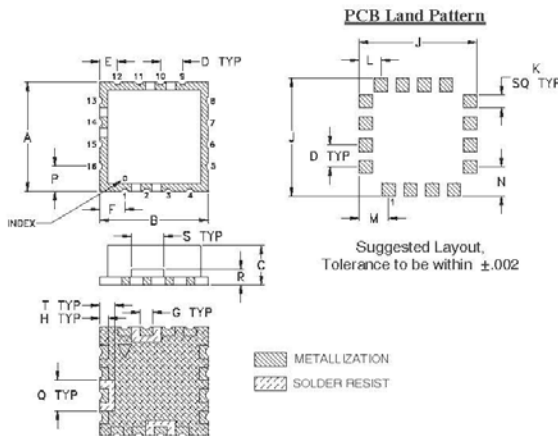
Operating Temperature -55°C to 85°C  
 Storage Temperature -55°C to 100°C  
 Absolute Max. Supply Voltage (Vcc) 7V  
 Absolute Max. Tuning Voltage (Vtune) 26V  
 All specifications 50 ohm system  
Permanent damage may occur if any of these limits are exceeded

#### Tape & Reel: F37

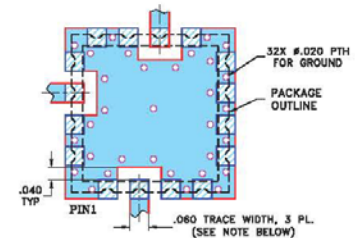
13" Reels with 20, 50, 100, 200, 500 devices

#### Environmental Ratings: ENV65

#### Outline Drawing



#### Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



#### NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE BOTTOM IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

#### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

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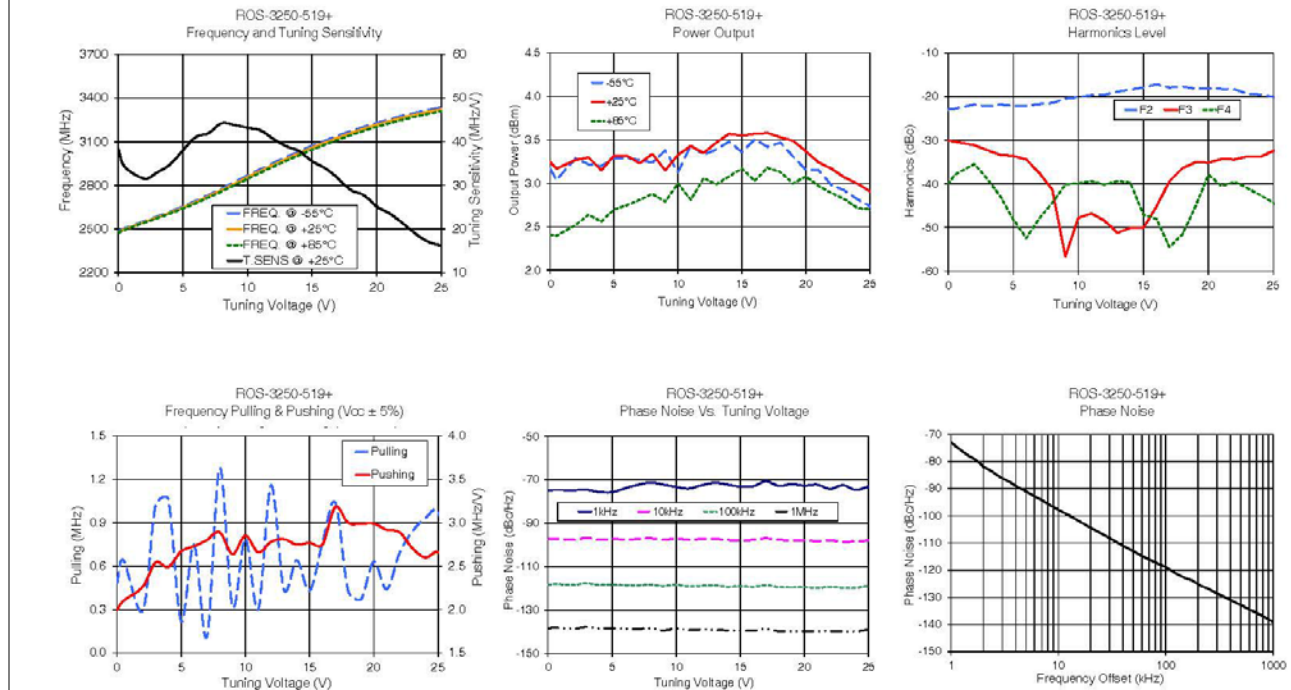
### PCN Form (D4-E000-73)

### Performance Data & Curves\*

### ROS-3250-519+

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 2900 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	42.42	2462.0	2452.4	2451.5	3.02	2.71	2.15	31.33	-20.9	-37.5	-45.8	2.07	1.02	-74.14	-95.1	-115.9	-135.8	1.0	-71.14
0.50	39.33	2482.5	2473.6	2473.0	3.04	2.85	2.37	31.36	-20.8	-37.4	-42.9	2.14	0.74	-74.42	-95.3	-116.4	-136.3	2.0	-77.88
2.00	35.56	2538.7	2531.0	2530.8	2.98	2.71	2.25	31.42	-20.6	-37.3	-41.2	2.14	0.96	-73.11	-95.0	-115.9	-136.1	3.5	-84.99
3.00	37.15	2573.4	2568.6	2565.9	3.14	2.82	2.45	31.43	-21.5	-37.3	-42.9	2.16	0.45	-72.34	-95.9	-116.5	-136.4	6.0	-91.01
4.00	39.71	2611.0	2603.7	2602.5	2.96	2.78	2.45	31.45	-21.4	-38.6	-41.6	2.21	0.96	-69.59	-95.3	-116.3	-136.3	8.5	-94.54
6.00	45.23	2694.7	2686.3	2683.9	2.85	2.64	2.37	31.50	-21.9	-38.2	-43.6	2.31	0.90	-71.35	-96.1	-117.0	-136.9	10.0	-96.09
8.00	48.87	2788.7	2779.0	2775.6	2.68	2.38	2.25	31.58	-21.8	-41.6	-39.1	2.30	0.26	-70.04	-95.9	-117.5	-137.5	20.8	-103.03
9.00	49.30	2838.4	2827.8	2823.3	2.68	2.63	2.48	31.61	-21.5	-38.3	-34.9	2.46	0.70	-70.51	-95.9	-117.3	-137.6	35.5	-108.68
10.00	48.40	2888.3	2877.1	2871.9	2.58	2.34	2.17	31.70	-19.9	-39.1	-32.6	2.55	0.77	-70.74	-96.0	-117.8	-137.9	60.7	-113.74
12.00	45.97	2964.8	2973.0	2966.9	2.73	2.48	2.29	31.89	-19.2	-43.0	-29.9	2.73	0.70	-70.10	-96.2	-118.3	-138.7	86.7	-116.67
13.00	44.64	3031.1	3018.9	3012.5	2.70	2.68	2.62	32.00	-19.3	-46.5	-29.1	2.79	0.38	-71.06	-96.8	-118.6	-138.9	100.0	-118.08
14.00	43.10	3075.7	3063.8	3056.9	2.89	2.61	2.41	32.13	-19.2	-45.7	-27.6	2.96	0.32	-70.23	-95.9	-118.8	-139.1	148.1	-121.52
15.00	40.17	3118.6	3108.7	3100.1	2.72	2.64	2.56	32.30	-18.9	-40.7	-28.0	3.12	0.32	-70.92	-96.4	-118.9	-139.3	177.0	-123.05
16.00	38.94	3158.8	3146.9	3140.7	2.92	2.65	2.50	32.47	-18.9	-36.1	-29.1	3.02	0.13	-70.57	-97.5	-119.3	-139.6	211.6	-124.62
18.00	36.34	3236.2	3223.5	3216.2	2.67	2.36	2.28	32.59	-19.2	-32.2	-27.9	3.09	0.26	-71.19	-96.4	-119.3	-139.7	302.4	-127.78
19.00	34.37	3272.7	3259.8	3251.8	2.62	2.51	2.43	32.63	-20.0	-32.9	-29.3	3.21	0.19	-71.70	-96.4	-119.5	-139.9	361.5	-129.48
20.00	32.00	3307.4	3294.2	3285.7	2.51	2.35	2.31	32.69	-20.2	-34.0	-29.2	3.42	0.32	-68.39	-95.9	-119.4	-140.0	507.5	-132.52
21.00	29.23	3339.8	3326.2	3317.7	2.51	2.39	2.29	32.82	-19.6	-35.4	-30.6	3.18	0.19	-70.48	-96.5	-120.2	-140.9	606.7	-133.91
22.00	27.87	3370.5	3355.4	3347.4	2.42	2.39	2.37	32.90	-20.1	-40.5	-31.3	3.11	0.26	-69.88	-97.5	-120.3	-140.8	651.6	-136.94
24.00	23.44	3423.6	3408.2	3400.2	2.36	2.36	2.29	33.10	-19.6	-40.4	-35.7	2.85	0.13	-69.28	-97.4	-120.8	-141.5	1000.0	-138.29

\*at 25°C unless mentioned otherwise



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### PCN Form (D4-E000-73)

Coaxial

# Voltage Controlled Oscillator

## ZX95-3250+

Linear Tuning 2550 to 3250 MHz



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-3250-S+

#### Features

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

#### Applications

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

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

#### Electrical Specifications

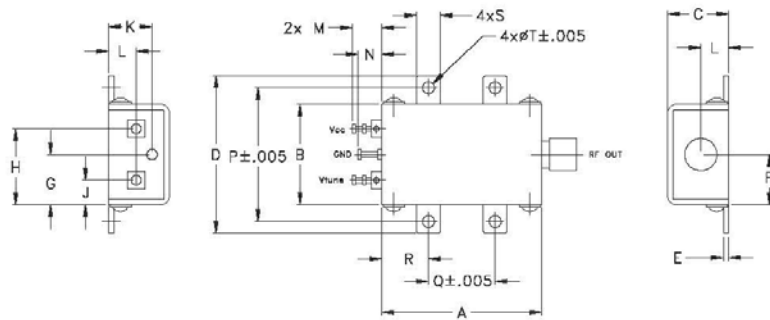
MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz Typ.				TUNING				NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)			PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER				
								VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.	Max.			Typ.	Typ.	Max.	Vcc (volts)	Current (mA)
ZX95-3250+	2550	3250	+2.5	-70	-96	-118	-139	0.5	24	30-50	35	160	-90	-20	-12	0.6	3	5	42			

#### 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) 26V  
 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-10-10.

#### 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



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		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	42.42	2462.0	2452.4	2451.5	3.02	2.71	2.15	31.33	-20.9	-37.5	-45.8	2.07	1.02	-74.14	-95.1	-115.9	-135.8	1.0	-71.14
0.50	39.33	2462.5	2473.6	2473.0	3.04	2.85	2.37	31.36	-20.8	-37.4	-42.9	2.14	0.74	-74.42	-95.3	-116.4	-136.3	2.0	-77.68
2.00	35.56	2538.7	2531.0	2530.8	2.98	2.71	2.25	31.42	-20.6	-37.3	-41.2	2.14	0.96	-73.11	-95.0	-115.9	-136.1	3.5	-84.99
3.00	37.15	2573.4	2566.6	2565.9	3.14	2.82	2.45	31.43	-21.5	-37.3	-42.9	2.16	0.45	-72.34	-95.9	-116.5	-136.4	6.0	-91.01
4.00	39.71	2611.0	2603.7	2602.5	2.96	2.78	2.45	31.45	-21.4	-38.6	-41.6	2.21	0.96	-69.59	-95.3	-116.3	-136.3	8.5	-94.54
6.00	45.23	2694.7	2686.3	2683.9	2.85	2.64	2.37	31.50	-21.9	-38.2	-43.6	2.31	0.90	-71.35	-96.1	-117.0	-136.9	10.0	-96.09
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10.00	48.40	2888.3	2877.1	2871.9	2.58	2.34	2.17	31.70	-19.9	-39.1	-32.6	2.55	0.77	-70.74	-96.0	-117.8	-137.9	60.7	-113.74
12.00	45.97	2984.8	2973.0	2966.9	2.73	2.48	2.29	31.89	-19.2	-43.0	-29.9	2.73	0.70	-70.10	-96.2	-118.3	-138.7	86.7	-116.67
13.00	44.64	3031.1	3018.9	3012.5	2.70	2.68	2.62	32.00	-19.3	-46.5	-29.1	2.79	0.38	-71.06	-96.8	-118.6	-138.9	100.0	-118.08
14.00	43.10	3075.7	3063.8	3056.9	2.89	2.61	2.41	32.13	-19.2	-45.7	-27.6	2.96	0.32	-70.23	-95.9	-118.8	-139.1	148.1	-121.52
15.00	40.17	3118.6	3106.7	3100.1	2.72	2.64	2.56	32.30	-18.9	-40.7	-28.0	3.12	0.32	-70.92	-96.4	-118.9	-139.3	177.0	-123.05
16.00	38.94	3158.8	3146.9	3140.7	2.92	2.65	2.50	32.47	-18.9	-36.1	-29.1	3.02	0.13	-70.57	-97.5	-119.3	-139.6	211.6	-124.62
18.00	36.34	3236.2	3223.5	3216.2	2.67	2.36	2.28	32.59	-19.2	-32.2	-27.9	3.09	0.26	-71.19	-96.4	-119.3	-139.7	302.4	-127.78
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22.00	27.87	3370.5	3355.4	3347.4	2.42	2.39	2.37	32.90	-20.1	-40.5	-31.3	3.11	0.26	-69.88	-97.5	-120.3	-140.8	851.6	-136.94
24.00	23.44	3423.6	3408.2	3400.2	2.36	2.36	2.29	33.10	-19.6	-40.4	-35.7	2.85	0.13	-69.28	-97.4	-120.8	-141.5	1000.0	-138.29

\*at 25°C unless mentioned otherwise

