

Coaxial

# Voltage Controlled Oscillator

ZX95-3050CA+

Linear Tuning 2635 to 3050 MHz

## Features

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

## Applications

- r & d
- lab
- instrumentation
- wireless communications
- wire-line broadband access



CASE STYLE: GB956

| Connectors | Model          | Price        | Qty.  |
|------------|----------------|--------------|-------|
| SMA        | ZX95-3050CA-S+ | \$ 40.95 ea. | (1-9) |

### +RoHS Compliant

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

## Electrical Specifications

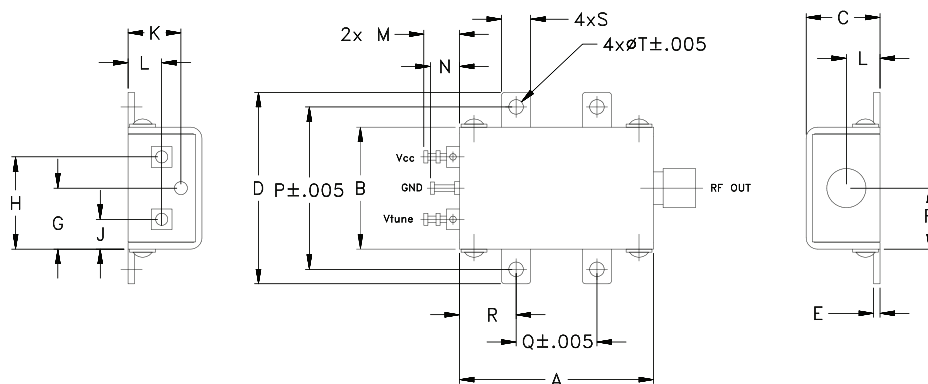
| MODEL NO.    | FREQ. (MHz) |      | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies,kHz<br><br>Typ. |      |      |      | TUNING            |                       |               |                                 |      | NON HARMONIC SPURIOUS (dBc) | HARMONICS (dBc) |      | PULLING pk-pk @12 dB (MHz) | PUSHING (MHz/V) | DC OPERATING POWER<br><br>Vcc Current (volts) (mA) |    |
|--------------|-------------|------|--------------------|--------------------------------------------------------------|------|------|------|-------------------|-----------------------|---------------|---------------------------------|------|-----------------------------|-----------------|------|----------------------------|-----------------|----------------------------------------------------|----|
|              |             |      |                    |                                                              |      |      |      | VOLTAGE RANGE (V) | SENSI- TIVITY (MHz/V) | PORT CAP (pF) | 3 dB MODULATION BANDWIDTH (MHz) |      |                             |                 |      |                            |                 |                                                    |    |
|              | Min.        | Max. | Typ.               | 1                                                            | 10   | 100  | 1000 | Min.              | Max.                  | Typ.          | Typ.                            | Typ. | Typ.                        | Max.            | Typ. | Typ.                       | Max.            |                                                    |    |
| ZX95-3050CA+ | 2635        | 3050 | +6.5               | -77                                                          | -104 | -125 | -145 | 0.5               | 16                    | 35-47         | 18                              | 100  | -90                         | -22             | -12  | 4.5                        | 0.2             | 8                                                  | 40 |

## Maximum Ratings

|                                      |                |
|--------------------------------------|----------------|
| Operating Temperature                | -55°C to 85°C  |
| Storage Temperature                  | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc)   | 10V            |
| Absolute Max. Tuning Voltage (Vtune) | 18V            |
| 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

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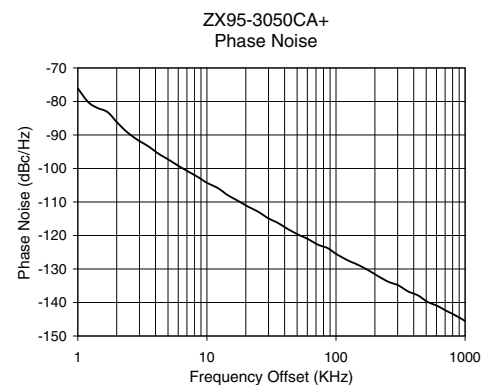
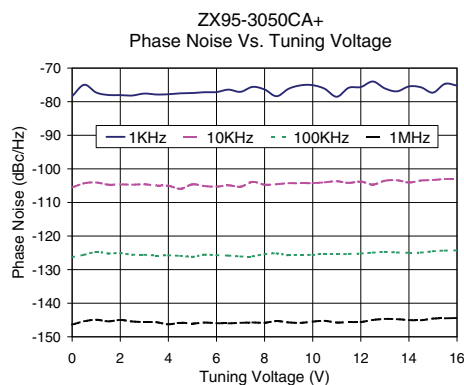
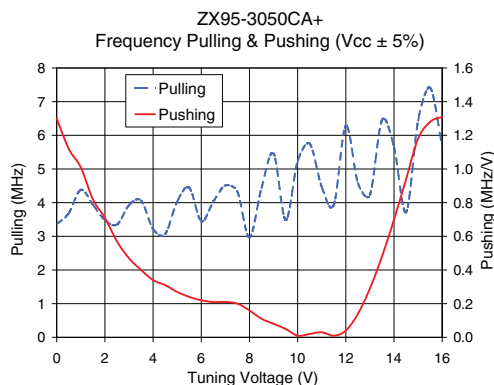
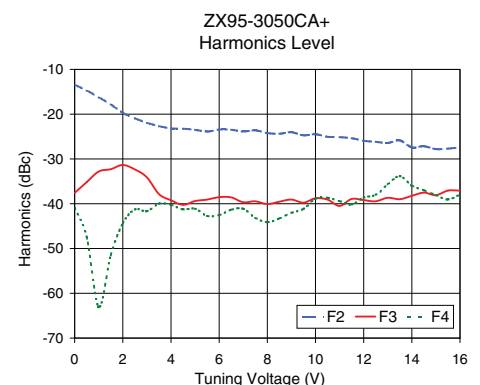
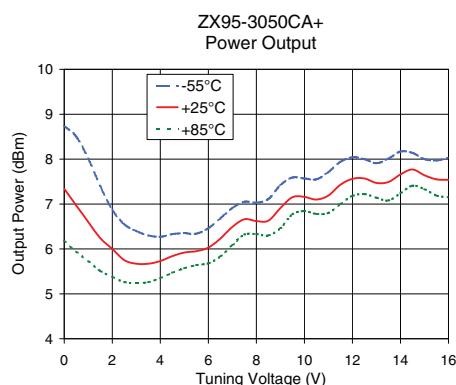
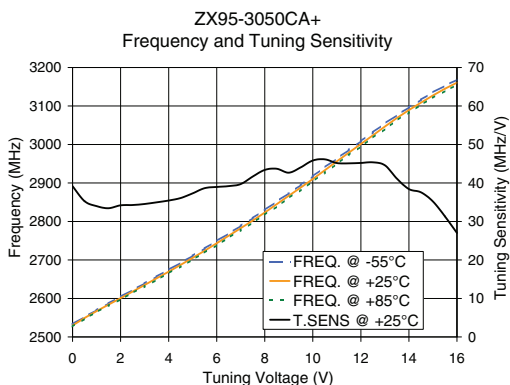
REV. OR  
M120142  
EDR-9253F2  
ZX95-3050CA+  
RAV  
120905  
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# Performance Data & Curves\*

# ZX95-3050CA+

| V<br>TUNE | TUNE<br>SENS<br>(MHz/V) | FREQUENCY<br>(MHz) |        |        | POWER OUTPUT<br>(dBm) |       |       | Icc<br>(mA) | HARMONICS (dBc) |       |       | FREQ.<br>PUSH<br>(MHz/V) | FREQ.<br>PULL<br>(MHz) | PHASE NOISE (dBc/Hz)<br>at offsets |        |        |        | FREQ<br>OFFSET<br>(KHz) | PHASE<br>NOISE at<br>2843 MHz<br>(dBc/Hz) |
|-----------|-------------------------|--------------------|--------|--------|-----------------------|-------|-------|-------------|-----------------|-------|-------|--------------------------|------------------------|------------------------------------|--------|--------|--------|-------------------------|-------------------------------------------|
|           |                         | -55°C              | +25°C  | +85°C  | -55°C                 | +25°C | +85°C |             | F2              | F3    | F4    |                          |                        | 1kHz                               | 10kHz  | 100kHz | 1MHz   |                         |                                           |
| 0.00      | 39.18                   | 2533.5             | 2529.8 | 2527.1 | 8.74                  | 7.34  | 6.19  | 33.02       | -13.4           | -37.6 | -40.9 | 1.30                     | 3.36                   | -78.4                              | -105.5 | -126.3 | -146.4 | 1.0                     | -76.10                                    |
| 0.50      | 35.27                   | 2552.1             | 2549.4 | 2547.2 | 8.50                  | 6.97  | 5.94  | 32.92       | -14.7           | -35.2 | -47.4 | 1.12                     | 3.69                   | -75.0                              | -104.3 | -125.6 | -145.4 | 2.0                     | -86.13                                    |
| 1.00      | 33.99                   | 2569.8             | 2567.0 | 2564.6 | 8.01                  | 6.60  | 5.73  | 32.82       | -16.2           | -32.8 | -63.1 | 1.01                     | 4.38                   | -77.3                              | -104.1 | -124.7 | -144.9 | 3.5                     | -93.33                                    |
| 2.00      | 34.20                   | 2604.6             | 2600.8 | 2597.7 | 6.87                  | 6.00  | 5.38  | 32.62       | -19.7           | -31.3 | -44.4 | 0.71                     | 3.48                   | -78.1                              | -104.6 | -125.1 | -145.0 | 6.0                     | -99.18                                    |
| 3.00      | 34.53                   | 2639.2             | 2635.0 | 2631.2 | 6.40                  | 5.67  | 5.24  | 32.46       | -21.9           | -34.1 | -41.7 | 0.47                     | 3.92                   | -77.6                              | -104.6 | -125.6 | -145.6 | 8.5                     | -102.51                                   |
| 4.00      | 35.44                   | 2674.7             | 2669.7 | 2665.6 | 6.27                  | 5.73  | 5.35  | 32.37       | -23.2           | -39.2 | -40.3 | 0.34                     | 3.22                   | -77.8                              | -105.0 | -125.7 | -146.3 | 10.0                    | -104.26                                   |
| 5.00      | 37.31                   | 2711.0             | 2705.5 | 2700.9 | 6.35                  | 5.92  | 5.57  | 32.31       | -23.5           | -39.4 | -41.1 | 0.27                     | 4.03                   | -77.4                              | -104.6 | -126.2 | -146.1 | 20.8                    | -111.38                                   |
| 5.50      | 38.66                   | 2730.0             | 2724.2 | 2719.3 | 6.34                  | 5.95  | 5.64  | 32.26       | -23.9           | -39.1 | -42.7 | 0.24                     | 4.44                   | -77.2                              | -105.1 | -125.6 | -145.8 | 35.5                    | -116.27                                   |
| 6.00      | 38.97                   | 2749.5             | 2743.5 | 2738.4 | 6.46                  | 6.03  | 5.68  | 32.22       | -23.4           | -38.5 | -42.5 | 0.22                     | 3.45                   | -77.1                              | -105.3 | -125.7 | -146.0 | 60.7                    | -121.08                                   |
| 7.00      | 39.72                   | 2788.7             | 2782.6 | 2777.5 | 6.91                  | 6.49  | 6.08  | 32.21       | -23.9           | -39.7 | -41.1 | 0.21                     | 4.51                   | -77.1                              | -105.3 | -126.1 | -145.9 | 86.7                    | -123.83                                   |
| 8.00      | 43.40                   | 2830.0             | 2823.3 | 2817.5 | 7.03                  | 6.62  | 6.33  | 32.14       | -24.2           | -40.1 | -44.1 | 0.16                     | 2.97                   | -76.4                              | -104.7 | -125.4 | -145.8 | 100.0                   | -125.47                                   |
| 9.00      | 42.69                   | 2873.5             | 2866.8 | 2860.9 | 7.42                  | 6.91  | 6.46  | 32.11       | -24.0           | -39.1 | -42.0 | 0.08                     | 5.46                   | -76.2                              | -104.3 | -125.7 | -145.7 | 148.1                   | -128.76                                   |
| 9.50      | 44.07                   | 2895.0             | 2888.2 | 2882.2 | 7.59                  | 7.15  | 6.77  | 32.10       | -24.7           | -39.8 | -41.2 | 0.05                     | 3.49                   | -75.1                              | -104.3 | -125.5 | -145.9 | 177.0                   | -130.32                                   |
| 10.00     | 45.84                   | 2917.4             | 2910.2 | 2904.0 | 7.57                  | 7.16  | 6.84  | 32.07       | -24.5           | -38.8 | -38.9 | 0.01                     | 5.23                   | -75.1                              | -104.3 | -125.6 | -145.5 | 211.6                   | -132.11                                   |
| 11.00     | 45.18                   | 2963.5             | 2956.2 | 2949.8 | 7.71                  | 7.19  | 6.80  | 32.03       | -25.1           | -40.5 | -39.4 | 0.03                     | 4.47                   | -78.5                              | -103.7 | -125.5 | -145.8 | 302.4                   | -134.86                                   |
| 12.00     | 45.20                   | 3008.8             | 3001.3 | 2995.0 | 8.04                  | 7.56  | 7.18  | 32.02       | -26.0           | -39.2 | -38.6 | 0.04                     | 6.28                   | -75.7                              | -103.8 | -125.2 | -145.6 | 361.5                   | -136.69                                   |
| 13.00     | 44.60                   | 3054.5             | 3046.6 | 3040.2 | 7.91                  | 7.47  | 7.14  | 31.97       | -26.4           | -38.7 | -35.7 | 0.29                     | 4.23                   | -76.0                              | -103.5 | -124.7 | -144.7 | 507.5                   | -139.75                                   |
| 14.00     | 38.41                   | 3096.7             | 3089.5 | 3083.6 | 8.17                  | 7.66  | 7.24  | 31.99       | -27.4           | -38.2 | -36.0 | 0.70                     | 5.65                   | -75.5                              | -104.1 | -125.0 | -145.0 | 606.7                   | -140.98                                   |
| 15.00     | 35.19                   | 3135.4             | 3127.5 | 3121.3 | 8.00                  | 7.64  | 7.33  | 31.94       | -27.8           | -38.1 | -38.1 | 1.18                     | 6.44                   | -77.3                              | -103.3 | -124.5 | -144.6 | 851.6                   | -143.96                                   |
| 16.00     | 27.02                   | 3168.4             | 3160.7 | 3154.9 | 8.03                  | 7.54  | 7.15  | 31.94       | -27.4           | -37.1 | -38.0 | 1.31                     | 5.68                   | -75.2                              | -103.0 | -124.3 | -144.4 | 1000.0                  | -145.52                                   |

\*at 25°C unless mentioned otherwise



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