

# Coaxial Amplifier

50Ω High Isolation 500 to 2500 MHz

## ZX60-2510M

### Features

- from 2.8V to 5V operation
- wide bandwidth, 500 to 2500 MHz
- high active directivity, 20 dB typ.
- output power, up to +17.1 dBm typ.
- protected by US patent 6,790,049

### Applications

- buffer amplifier
- LO amplifiers for mixers
- cellular
- PCN



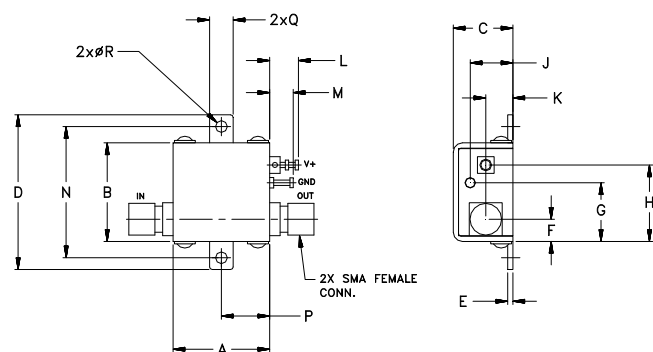
CASE STYLE: GC957

| Connectors | Model      | Price       | Qty.  |
|------------|------------|-------------|-------|
| SMA        | ZX60-2510M | \$59.95 ea. | (1-9) |

### Electrical Specifications at 25°C

| Parameter                           | Condition (MHz) | 2.8V |      |      | 5.0V |      |      | Units |
|-------------------------------------|-----------------|------|------|------|------|------|------|-------|
|                                     |                 | Min. | Typ. | Max. | Min. | Typ. | Max. |       |
| Frequency                           |                 | 500  |      | 2500 | 500  |      | 2500 | MHz   |
| Gain                                | 500             | —    | 9.1  | —    | —    | 10.3 | —    | dB    |
|                                     | 1000            | —    | 11.2 | —    | —    | 12.7 | —    |       |
|                                     | 1500            | —    | 11.2 | —    | —    | 12.9 | —    |       |
|                                     | 2000            | —    | 10.7 | —    | 10.4 | 12.5 | —    |       |
|                                     | 2500            | —    | 10.3 | —    | —    | 12.1 | —    |       |
| Output Power at 1dB compression     | 500             | —    | 13.7 | —    | —    | 17.1 | —    | dBm   |
|                                     | 2500            | —    | 13.0 | —    | —    | 15.1 | —    |       |
| Noise Figure                        | 1000            | —    | 5.4  | —    | —    | 5.4  | —    | dB    |
| Output third order intercept point  | 1000            | —    | 24.9 | —    | —    | 28.8 | —    | dBm   |
|                                     | 2000            | —    | 23.4 | —    | —    | 26.5 | —    |       |
| Input VSWR                          |                 | —    | 1.5  | —    | —    | 1.5  | —    | :1    |
| Output VSWR                         |                 | —    | 1.6  | —    | —    | 1.6  | —    | :1    |
| Active Directivity (Isolation-Gain) |                 | —    | 20   | —    | —    | 20   | —    | dB    |
| Supply Current                      |                 | —    | 63   | —    | —    | 69   | 95   | mA    |

### Outline Drawing



### Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F    | G     | H     | J    | K    | L    | M    | N     | P    | Q    | R    | wt    |
|-------|-------|-------|-------|------|------|-------|-------|------|------|------|------|-------|------|------|------|-------|
| .74   | .75   | .46   | 1.18  | .04  | .17  | .45   | .59   | .33  | .21  | .22  | .18  | 1.00  | .37  | .18  | .106 | grams |
| 18.80 | 19.05 | 11.68 | 29.97 | 1.02 | 4.32 | 11.43 | 14.99 | 8.38 | 5.33 | 5.59 | 4.57 | 25.40 | 9.40 | 4.57 | 2.69 | 23.0  |

### Maximum Ratings

| Parameter                  | Ratings            |
|----------------------------|--------------------|
| Operating Temperature      | -40°C to 85°C Case |
| Storage Temperature        | -55°C to 100°C     |
| DC Voltage                 | 7V                 |
| Input RF Power (no damage) | +10 dBm            |
| Power Dissipation          | 500mW              |

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



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| FREQUENCY<br>(MHz) | GAIN<br>(dB) |       | DIRECTIVITY<br>(dB) |       | VSWR IN<br>(:1) |      | VSWR OUT<br>(:1) |      | NOISE<br>FIGURE<br>(dB) |      | POUT at<br>1 dB COMPR.<br>(dBm) |       |
|--------------------|--------------|-------|---------------------|-------|-----------------|------|------------------|------|-------------------------|------|---------------------------------|-------|
|                    | 2.8V         | 5V    | 2.8V                | 5V    | 2.8V            | 5V   | 2.8V             | 5V   | 2.8V                    | 5V   | 2.8V                            | 5V    |
| 500.00             | 9.10         | 10.33 | 30.11               | 28.71 | 1.93            | 1.95 | 2.00             | 1.86 | 5.70                    | 5.59 | 13.15                           | 17.28 |
| 600.00             | 10.03        | 11.30 | 27.78               | 26.18 | 1.76            | 1.78 | 1.56             | 1.43 | 5.62                    | 5.52 | 13.84                           | 17.20 |
| 800.00             | 10.87        | 12.24 | 24.75               | 23.62 | 1.55            | 1.57 | 1.18             | 1.06 | 5.57                    | 5.49 | 13.78                           | 16.41 |
| 900.00             | 11.09        | 12.48 | 23.70               | 22.45 | 1.48            | 1.50 | 1.13             | 1.09 | 5.54                    | 5.46 | 13.66                           | 16.40 |
| 1100.00            | 11.27        | 12.77 | 21.99               | 21.11 | 1.37            | 1.40 | 1.18             | 1.23 | 5.51                    | 5.42 | 13.51                           | 15.96 |
| 1400.00            | 11.32        | 12.94 | 20.14               | 19.32 | 1.25            | 1.28 | 1.33             | 1.41 | 5.44                    | 5.35 | 13.23                           | 15.50 |
| 1700.00            | 11.09        | 12.84 | 18.87               | 18.07 | 1.17            | 1.18 | 1.48             | 1.54 | 5.47                    | 5.35 | 12.98                           | 15.31 |
| 2000.00            | 10.80        | 12.65 | 18.05               | 17.39 | 1.11            | 1.09 | 1.61             | 1.66 | 5.51                    | 5.40 | 12.73                           | 15.13 |
| 2300.00            | 10.20        | 12.11 | 17.88               | 17.13 | 1.11            | 1.04 | 1.72             | 1.74 | 5.53                    | 5.39 | 12.53                           | 14.89 |
| 2500.00            | 9.72         | 11.57 | 17.84               | 17.37 | 1.13            | 1.06 | 1.77             | 1.79 | 5.56                    | 5.43 | 12.50                           | 14.71 |

