

Low Noise Amplifier

ZX60-242GLN-S+

50Ω

1710 to 2400 MHz

Features

- Ultra low noise figure, 0.85 dB typ.
- High gain, 30 dB typ.
- Output power, up to +20 dBm typ.
- Good output IP3, 36.5 dBm typ.
- Unconditionally stable
- Protected by US patent 6,790,049

Applications

- Base transceiver station, tower mounted amplifier, repeater
- WCDMA
- TD SCDMA
- PCS Rx / PCS Tx
- General purpose low noise amplifier
- Lab
- Instrumentation
- Test equipment



CASE STYLE: GA955

| Connectors | Model |
|------------|----------------|
| SMA | ZX60-242GLN-S+ |

+RoHS Compliant

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

Electrical Specifications at 25°C

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|------------------------------------|-----------------|------|--------|--------|-------|
| Frequency Range | | 1710 | | 2400 | MHz |
| Noise Figure | 1710 - 1880 | | 0.80 | 1.05 | dB |
| | 1850 - 1990 | | 0.80 | 1.05 | |
| | 1990 - 2200 | | 0.90 | 1.10 | |
| | 2200 - 2400 | | 0.90 | 1.20 | |
| Gain | 1710 - 1880 | 28.0 | 31.0 | | dB |
| | 1850 - 1990 | 28.0 | 30.5 | | |
| | 1990 - 2200 | 26.5 | 29.5 | | |
| | 2200 - 2400 | 25.5 | 28.0 | | |
| Gain Flatness | 1710 - 1880 | | ± 0.60 | ± 1.20 | dB |
| | 1850 - 1990 | | ± 0.50 | ± 1.00 | |
| | 1990 - 2200 | | ± 0.70 | ± 1.40 | |
| | 2200 - 2400 | | ± 0.65 | ± 1.30 | |
| Output Power at 1dB compression | 1710 - 1880 | 18.0 | 20.0 | | dBm |
| | 1850 - 1990 | 18.0 | 20.0 | | |
| | 1990 - 2200 | 18.0 | 20.5 | | |
| | 2200 - 2400 | 18.5 | 21.0 | | |
| Output third order intercept point | 1710 - 1880 | | 36 | | dBm |
| | 1850 - 1990 | | 36 | | |
| | 1990 - 2200 | | 37 | | |
| | 2200 - 2400 | | 37 | | |
| Input VSWR | 1710 - 1880 | | 1.4 | | :1 |
| | 1850 - 1990 | | 1.3 | | |
| | 1990 - 2200 | | 1.2 | | |
| | 2200 - 2400 | | 1.7 | | |
| Output VSWR | 1710 - 1880 | | 1.3 | | :1 |
| | 1850 - 1990 | | 1.3 | | |
| | 1990 - 2200 | | 1.5 | | |
| | 2200 - 2400 | | 1.7 | | |
| Active Directivity | 1710-2400 | | 11.5 | | dB |
| DC Supply Voltage | | | 5.0 | | V |
| Supply Current | | | 120 | 150 | mA |

Notes

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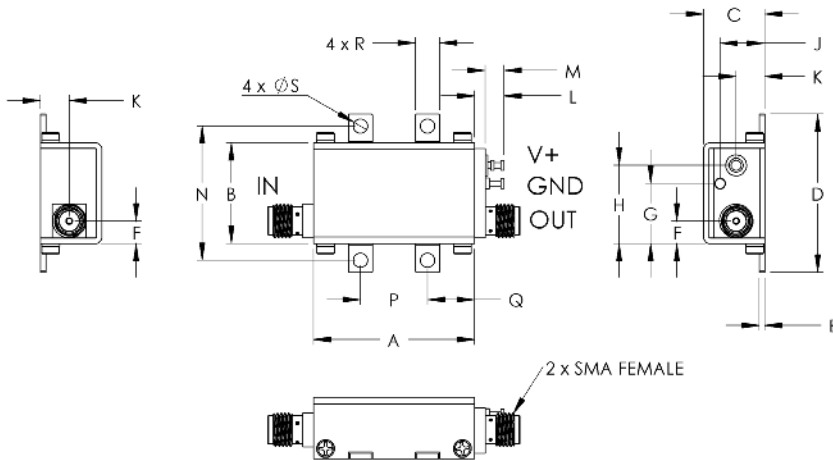


Maximum Ratings

| Parameter | Ratings |
|----------------------------|--------------------|
| Operating Temperature | -40°C to 85°C Case |
| Storage Temperature | -55°C to 100°C |
| DC Voltage | 5.5 V |
| Input RF Power (no damage) | +17 dBm |
| Power Consumption | 825 mW |

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

Outline Drawing



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

Outline Dimensions (inch/mm)

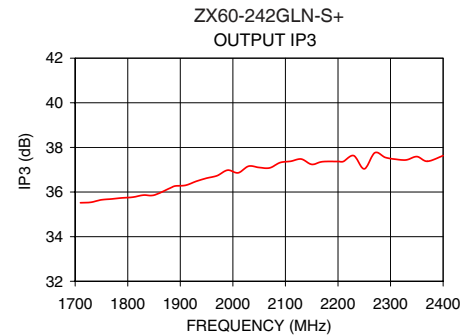
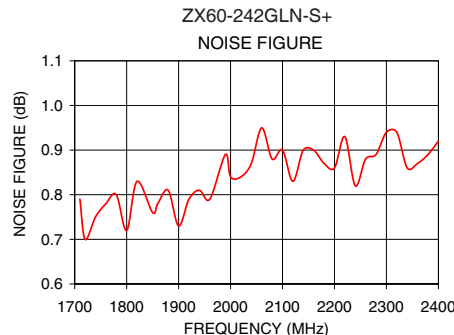
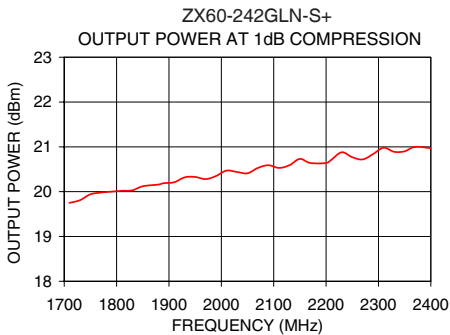
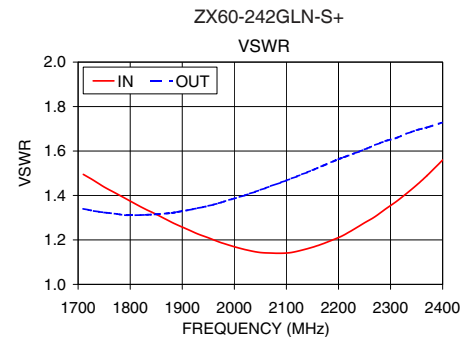
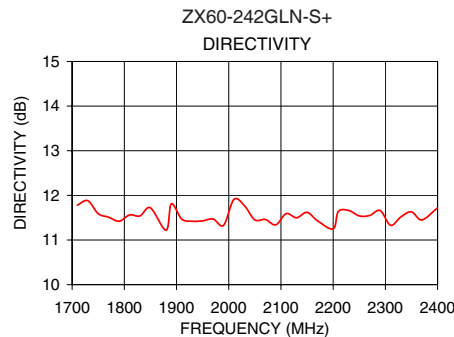
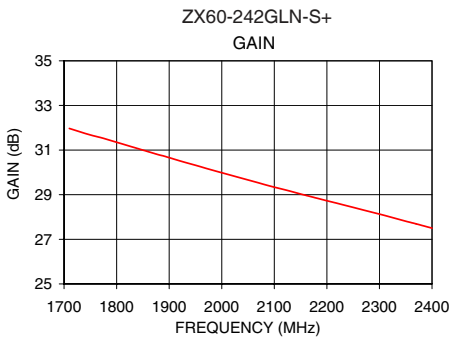
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | wt. |
|-------|-------|-------|-------|------|------|-------|-------|------|------|------|------|-------|-------|------|------|------|-------|
| 1.20 | .75 | .46 | 1.18 | .04 | .17 | .45 | .59 | .33 | .21 | .22 | .14 | 1.00 | .50 | .35 | .18 | .106 | grams |
| 30.48 | 19.05 | 11.68 | 29.97 | 1.02 | 4.32 | 11.43 | 14.99 | 8.38 | 5.33 | 5.59 | 3.56 | 25.40 | 12.70 | 8.89 | 4.57 | 2.69 | 35.0 |

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| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR IN (:1) | VSWR OUT (:1) | POWER OUT @ 1dB COMPRESSION (dBm) | OUTPUT IP3 (dBm) | NF (dB) |
|-----------------|-----------|------------------|--------------|---------------|-----------------------------------|------------------|---------|
| 1710.00 | 31.97 | 11.78 | 1.49 | 1.34 | 19.75 | 35.52 | 0.79 |
| 1750.00 | 31.68 | 11.59 | 1.44 | 1.32 | 19.94 | 35.65 | 0.77 |
| 1800.00 | 31.35 | 11.52 | 1.38 | 1.31 | 20.00 | 35.59 | 0.72 |
| 1850.00 | 31.00 | 11.72 | 1.32 | 1.32 | 20.12 | 35.86 | 0.76 |
| 1880.00 | 30.79 | 11.22 | 1.28 | 1.32 | 20.16 | 36.17 | 0.81 |
| 1900.00 | 30.66 | 11.28 | 1.26 | 1.33 | 20.21 | 36.29 | 0.73 |
| 1950.00 | 30.32 | 11.43 | 1.21 | 1.35 | 20.33 | 36.62 | 0.80 |
| 1990.00 | 30.05 | 11.33 | 1.18 | 1.38 | 20.35 | 36.98 | 0.89 |
| 2040.00 | 29.73 | 11.88 | 1.15 | 1.42 | 20.41 | 37.15 | 0.87 |
| 2060.00 | 29.60 | 11.50 | 1.14 | 1.43 | 20.45 | 37.00 | 0.95 |
| 2100.00 | 29.35 | 11.54 | 1.14 | 1.47 | 20.56 | 37.23 | 0.90 |
| 2140.00 | 29.09 | 11.53 | 1.16 | 1.51 | 20.68 | 37.23 | 0.90 |
| 2180.00 | 28.85 | 11.36 | 1.19 | 1.54 | 20.60 | 37.44 | 0.87 |
| 2200.00 | 28.73 | 11.25 | 1.21 | 1.56 | 20.64 | 37.37 | 0.86 |
| 2260.00 | 28.37 | 11.50 | 1.29 | 1.62 | 20.72 | 37.31 | 0.88 |
| 2300.00 | 28.12 | 11.35 | 1.35 | 1.65 | 20.90 | 37.52 | 0.94 |
| 2320.00 | 28.00 | 11.66 | 1.39 | 1.67 | 20.93 | 37.29 | 0.94 |
| 2360.00 | 27.75 | 11.73 | 1.47 | 1.70 | 20.95 | 37.42 | 0.87 |
| 2380.00 | 27.63 | 11.76 | 1.51 | 1.72 | 20.98 | 37.18 | 0.89 |
| 2400.00 | 27.50 | 11.72 | 1.56 | 1.73 | 20.97 | 37.63 | 0.92 |



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