

# 900 MHz Tower Mounted Amplifier

## *Compact GSM Narrow Band*



**REMEC Tower Mounted Amplifiers help reduce the cost of base station deployment by extending cell coverage.**

The REMEC GSM900 TMA is an ultra compact TMA designed using REMEC's extensive experience of Tower Mounted Equipment. This TMA contains all of the reliability improving features of all REMEC TMAs - IP68 rated, torsional stress relieved connectors, solid-state bypass circuitry, and robust lightning performance.

REMEC TMAs improve in-building coverage and reduce overall system bit error rate, which is vitally important for data applications.

Time and time again, network trials have proven these units to significantly improve network performance, providing the largest improvements margins in competitive benchmarking.

### FEATURES

- Market leading low noise performance
- Ultra compact design
- Simple installation
- Gain 12 dB
- Low noise figure, 1.7 dB typical
- Rejection of 850 MHz cellular transmit
- Bypass in "power down" or fault modes
- Rugged and highly reliable
- Excellent lightning protection
- Full water immersion (IP68) specification
- High field-proven MTBF

### BENEFITS

- Extends cellular coverage
- Reduces bit error rate - vital for data applications
- Significantly reduces roll out costs
- Improves call quality
- Reduces dropped calls
- Enhances in-building coverage
- Increases handset battery life

### ORDERING INFORMATION

- See table on back of data sheet for

**REMEC**

*Building solutions  
through teamwork*

# 900 MHz Tower Mounted Amplifier

## Compact GSM Narrow Band

Tx Characteristics	Specification
Frequency Range	935 to 960 MHz
Bandwidth	20 MHz
Insertion Loss	< 0.5 dB typ.
Ripple	± 0.1 dB
Maximum Power Handling	+52 dBm CW (158 W) +61 dBm peak (1250 W)
Return Loss (VSWR)	> 18 dB (< 1.29:1)

System Characteristics	Specification
Rejection at input to LNA (typ.)	
Rx Edge -5 MHz	> 30 dB
Rx Edge -3.5 MHz	> 15 dB
At 894 MHz (G2005601 only)	>50 dB
Rejection ANT to BTS:	
824 MHz to Rx Edge - 15 MHz	> 80 dBc
Intermodulation	< -110 dBm
(2 Tx Carriers at +43 dBm, products in Rx Operating Band)	
DC Supply Voltage	+11 Vdc to +13Vdc
Current (nominal)	125 mA normal 175 mA alarm

Rx Characteristics	Specification
Tuneable Frequency Range	890 to 915 MHz
Bandwidth	up to 20 MHz
Noise Figure (typical)	≤ 1.7 dB
Gain over frequency and temperature	12.0 ± 0.9 dB
Gain variation with frequency	± 0.5 dB
Output 1dB compression	≥ +10 dBm
Output IP3	≥ +22 dBm
Loss in Bypass mode	< 2.0 dB typ.
Return Loss (VSWR)	> 18 dB active (1.29:1) > 14 dB bypass (1.5:1)

Environmental Characteristics	Specification
Operating Temperature Range	-40 to +65°C (-40 to +149°F)
Storage Temperature	-40 to +85°C (-40 to +185°F)
Relative Humidity	Full Immersion
Enclosure Protection	IP68
Lightning Protection	
BTS Port	8/20 µsec 10kA pulse, IEC-801-5
Ant Port	DC Grounded
EMC	ETS300 342-3 compliant
MTBF (Field)	> 1,000,000 hours

Mechanical Characteristics	Specification
Dimensions	220 x 162 x 103 mm (8.7 x 6.4 x 4.1 in)
Weight	< 4.8 kg (< 10.6 lbs)
Volume	3.2 Ltr (195 cu.in.)
RF Connectors	
BTS	7/16 Female
ANT	7/16 Female

TMA Model No.	Transmit (MHz)	Receive (MHz)
G20040A1	940-960	895-915
G20046A1	935-955	890-910
G20047A1	930-950	885-905
G20048A1	942.5-960	897.5-915
G2005601	952.5-960	907.5-915

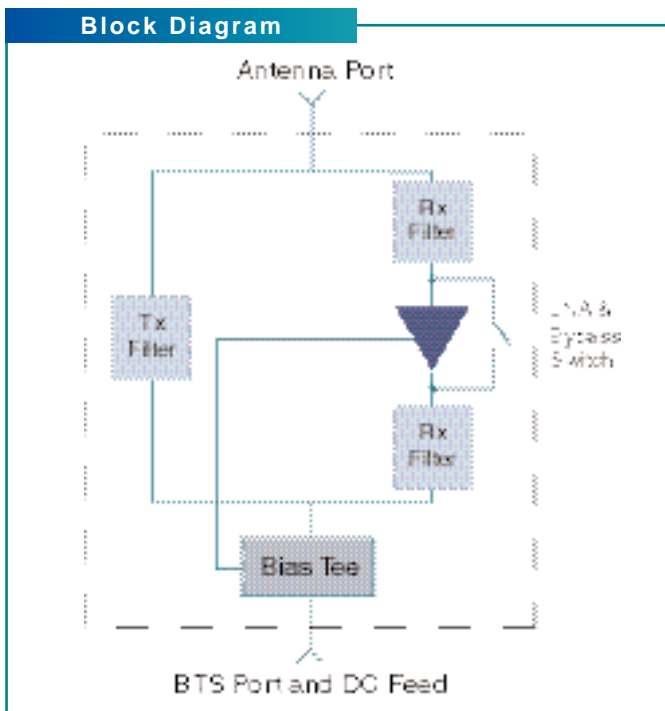
### REMEC Locations

#### Americas Region

14020 Stowe Drive  
Poway, California 92064  
Tel: 858.505.3720  
FAX: 858.505.3666

#### EMEA Region

Midshires Business Park  
Smeaton Close  
Aylesbury  
Buckinghamshire  
HP 19 8HL, United Kingdom  
Tel: +44 (0)1296 319 319  
FAX: +44 (0)1296 319 200



This document gives only a general description of the product(s) and shall not form part of any contract.  
DS-Compact -900 MHz NarrowBand TMA, Rev.011905

# REMEC