

BST28-001 BROADBAND BASE STATION TRANSCEIVER

- **Solid-State Design for LMDS Applications**
- **Compact Outdoor Package**
- **QPSK or QAM Capability**
- **Single Antenna for Transmit and Receive**



PRODUCT APPLICATION:

The BST28-001 is an outdoor solid-state transceiver designed to provide P-T-MP (point-to-multi-point), full duplex (two-way) communication with QPSK or QAM modulated carriers (FDMA multiple carrier regime) in the 28/31 GHz frequency bands.

The transceiver features a modular design consisting of integrated transmitter, receiver and diplexer modules. The high performance diplexer makes it possible to use the transceiver with a single antenna. The transceiver outdoor package is mechanically integrated with the antenna to provide a low-loss connection and to facilitate installation, mounting and antenna pointing.

Downstream transmission is in the 28.25- 28.75 GHz or the 27.5 - 28.0 GHz bands and the upstream transmission in the 31.0- 31.3 GHz band. Downstream input IF frequencies are in the 950-1450 MHz range and upstream output IF frequencies are in the 400-700 MHz range.

The transceiver is offered with an output power capability corresponding to a 1-dB CP (compression point) of 1 watt. The recommended single QPSK-modulated carrier output power is 27 dBm. Output power per carrier for multiple-carrier operation depends on the number of carriers.

Test points are provided to monitor output signal level, IF input levels and crystal oscillator reference frequency. Diagnostic voltages are provided for local or remote monitoring.

Product Specification¹

CABLE AML

Transmitter Section	
Input Frequency ² :	Downstream: 950 - 1450 MHz
Modulation Format:	QPSK or QAM
Input Level per carrier (nominal):	-30 dBm/carrier
Output Level:	27 dBm max
Output Frequency ² :	28.25 - 28.75 GHz or 27.5 - 28.0 GHz (optional)
Receiver Section	
Input Frequency ² :	31.0 - 31.3 GHz
Noise Figure:	6 dB
Output Level (Nominal):	-20 dBm
Output Frequency ² :	400 - 700 MHz
Common Specifications	
Frequency Response:	±1 dB
Frequency Stability:	± 0.005%
Input Return Loss:	15 dB
Output Return Loss:	18 dB
RF Connectors:	WR-28 Waveguide
Input/Output Connector:	Type "N"
Mounting:	Outdoor mount to vertical pipe
Temperature Range:	-40° to 113°F (-40° to 45°C)
Humidity:	100%
Primary Power:	110/220 VAC, 50/60Hz (per customer specification)
Weight:	10 lb. (4.5 kg)
Dimensions:	20cm W x 20cm H x 15cm D (8" x 8" x 6")

¹ Specifications subject to change without prior notice.

² Other frequencies available.