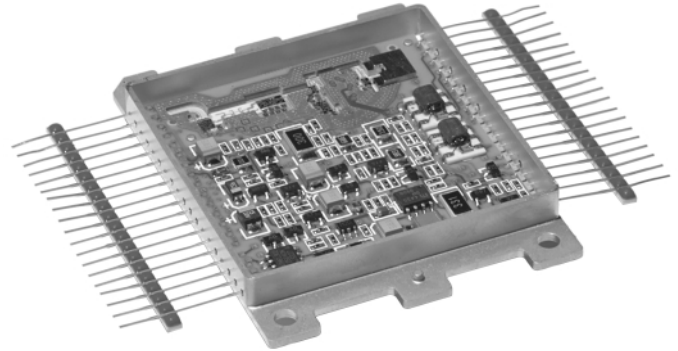


Program Features

- Complete Millimeter Wave Transceiver
- Operating Frequency 57 – 59 GHz
- Output Power +5 dBm
- Includes Internal VCO
- Time Division Duplex (TDD)
- Single Compact Package
- High-Volume Production
- FCC and ETSI Compliant

**Description**

The PDH point-to-point transceiver shown above was designed and manufactured by Endwave for a major cellular infrastructure OEM. The transceiver provided a complete subsystem with all the necessary transmit, receive and source functions required for a full-featured TDD millimeter wave digital point-to-point radio. These digital radios were designed to operate in “unlicensed” or “self-regulated” spectrum on a worldwide basis, and were certified ETSI and FCC compliant. A mechanical package featuring surface mount assembly was a requirement for this design. An onboard VCO was utilized. This transceiver provides +5 dBm Psat through a WR-15 waveguide

PDH Point-to-Point Transceiver

Specifications

Specifications	Half Duplex (TDD)	
Transmit Section	RF Frequency Range (GHz)	57.0 – 59.0
	VCO Modulation BW (MHz)	> 20
	Output Power, Psat (dBm)	5 ± 3
	RF Output Return Loss (dB)	9
Receive Section	RF Frequency Range (GHz)	57.0 – 59.0
	IF Input Frequency I and Q (MHz)	0.1 - 50
	I and Q Balance (dB)	± 2
	I and Q Phase Balance (Deg)	± 10
	Noise Figure DSB, > 4Mhz (dB)	12
	Input Compression, P1dB (dBm)	-20
	Small Signal Gain (dB)	-3 to 10
	RF Input Return Loss (dB)	7
	IF Output Return Loss (>0.5MHz) (dB)	10
	TX to Rx Leakage (dBm)	-30
LO Section	Main Output Frequency (GHz)	57.0 – 59.0
	Divided Output Frequency	1.78 – 1.84
	Multiplication Factor	32
	Divider Output (dBm)	-10 to 4
	Tuning Voltage (V)	1 – 10
	Phase Noise 100kHz (dBc/Hz)	-60
	Phase Noise 1MHz (dBc/Hz)	-90
Mechanical	Dimensions (mm)	51 x 51 x 8
	Weight (g)	<200
	Wave guide Interface	WR-15
	IF Connector	Surface Mount
	Supply, Control Connectors	Surface Mount
	Operating Temperature (C°)	-40 to +70
Power Supply	Positive Supply Voltage (V)	5
	Positive Supply Current (A)	0.7
	Negative Supply Voltage (V)	-5.0
	Negative Supply Current (mA)	350

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Endwave is an
ISO 9001 certified company