X-BAND REPEATER BLOCK

The repeater block is used for weak X-band RF signals amplifying from two antennas. The gain is carried out by two blocks of amplifiers and bandpass filters. X-band repeater block is applied in GSM / MVDS / MITRIS systems

X-band repeater block is transceiver with LNA (low-noise amplifier) which is used for amplifying of weak signals in X-band.

Signal gain is carried out by two amplifier blocks and bandpass filters. These amplifying lines are connected to respective branches of ferrite circulators. Thus created the diplexers. Received signals are frequency divided by diplexers obtained from both inputs. The first block of amplifiers and bandpass filters amplifie the signal with a center frequency of 7.839 GHz, and the second block – with a center frequency of 8.150 GHz. These amplifying lines with inputs / outputs are connected to respective branches of the ferrite circulators. Circular inputs are connected to the strip / waveguide transitions of WR112 waveguides. Their flanges are the inputs / outputs of X-band repeater block.

At X-band repeater block inputs / outputs are located the strip / waveguide adaptors. Their waveguide flanges are used for connecting the low-noise amplifier modules to the antennas. The voltage of X-band repeater block is supplied via PC4 type connector.

KEY FEATURES:

- Compact sizes
- Wide supply voltage range: +15...+30 VDC
- High efficiency – supply current is less than 300 mA
- Output power @P1dB: 23 dBm
- Waveguide flanges: WR-112

- 1st center frequency of 7.839 GHz and 2d center frequency of 8.150 GHz (or other via customized form)
- 40 MHz band for center frequency
- 35 dB gain (not less)

Parameter	Value
Frequency ranges:	
amplifier 1	7.839 GHz (with bandwidth 40 MHz)
amplifier 2	8.150 GHz (with bandwidth 40 MHz)
Gain of amplifiers 1 and 2, dB, not less	35
Noise figure of amplifiers 1 and 2, dB, not more	5.0
Output Power @P1dB, dBm	23
Output Power of amplifiers 1 and 2, dBm at level IMD3 – 45dBc, not less	+15...16
Gain flatness over frequency range (amplifiers 1 and 2), dB, not less	+/– 0.6
Input/output, not more	1.5
Input/output interfaces	Waveguide flanges WR-112
Return loss at Repeater Block inputs/outputs, not more	15 dB
Connectors for supply voltage	PC4
Supply voltage, V	+15...+30 VDC
Supply current, mA	300 mA max

Operating temperature	From –30 to +60°C
Operating humidity	from 0% to 95%
Dimensions (W x H x D)	134 x 47.9 x 178.8
Weight, kg	up to 3 kg

Parameter	Value
Frequency ranges:	
amplifier 1	7.839 GHz (with bandwidth 40 MHz)
amplifier 2	8.150 GHz (with bandwidth 40 MHz)
Gain of amplifiers 1 and 2, dB, not less	35
Noise figure of amplifiers 1 and 2, dB, not more	5
Output Power @P1dB, dBm	23
Output Power of amplifiers 1 and 2, dBm at level IMD3 – 45dBc, not less	
Gain flatness over frequency range (amplifiers 1 and 2), dB, not less	
Input/output, not more	1.5
Input/output interfaces	Waveguide flanges WR-112
Return loss at Repeater Block inputs/outputs, not more	15 dB
Connectors for supply voltage	PC4
Supply voltage, V	

Supply current, mA	300 mA max
Operating temperature	From −30 to +60°C
Operating humidity	from 0% to 95%
Dimensions (W x H x D)	134 x 47.9 x 178.8
Weight, kg	up to 3 kg

Taking into consideration that we (UMT LLC) are developer and system integrator, also do not stop on our technical growth and improvement, know that view of all our devices and equipment including their technical parameters may be different from pictures presented on website and parameters listed on each device webpage.

***Note!** All details customer has to confirm in advance during ordering and before payment. Those parameters that were not specified and / or were not agreed while ordering will be implemented as basic at the discretion of the manufacturer. Each our customer has 1.5 year warranty and 7 year aftersales support for whole range of our products.*