MICROWAVE TV LINKS

MVL Series

Technical Characteristics

Output power and frequency range:

HMT2/2 indoor IF up-converter and transmitter	2 W, 1.3 - 2.7 GHz
HMT2/5 indoor IF up-converter and transmitter	5 W, 1.3 - 2.7 GHz
HMT2/25 indoor IF up-converter and transmitter	25 W, 1.3 - 2.7 GHz
HMR 2 indoor receiver and IF down-converter	1.3 - 2.7 GHz
HMT4/1 indoor IF up-converter and transmitter	1 W, 4.2 - 4.8 GHz
HMT4/4 indoor IF up-converter and transmitter	4 W, 4.2 - 4.8 GHz
HMT4/8 indoor IF up-converter and transmitter	8 W, 4.2 - 4.8 GHz
HMR 4 indoor receiver and IF down-converter	4.2 - 4.8 GHz
HMT 8/1 outdoor IF up-converter and amplifier	1 W, 5.9.-.9.9 GHz
HMT 8/4 outdoor IF up-converter and amplifier	4 W, 5.9.-.9.9 GHz
HMT 8/6 outdoor IF up-converter and amplifier	6 W, 5.9.-.9.9 GHz
HMT 8/8 outdoor IF up-converter and amplifier	8 W, 5.9.-.9.9 GHz
HMR 8 outdoor front-end and IF down-converter	5.9.-.9.9 GHz
HMT 10/02 outdoor IF up-converter and amplifier	0.2 W, 10 - 12.7 GHz
HMT 10/1 outdoor IF up-converter and amplifier	1 W, 10 - 12.7 GHz
HMR 10 outdoor front-end and IF down-converter	10 - 12.7 GHz
HMT 14/02 outdoor IF up-converter and transmitter	0.2 W, 12.8.-.15.0 GHz
HMT 14/1 outdoor IF up-converter and transmitter	1 W, 12.8.-.15.0 GHz

HMR 14 outdoor front-end and IF down-converter	**12.8.-.15.0 GHz**
HMT 24/02 outdoor IF up-converter and transmitter	**0.2 W, 22.3 - 24.5.0 GHz**
HMT 24/03 outdoor IF up-converter and transmitter	**0.3 W, 22.3 - 24.5.0 GHz**
HMT 24/1 outdoor IF up-converter and transmitter	**1 W, 22.3 - 24.5.0 GHz**
HMR 23 outdoor front-end and IF down-converter	**22.3 - 24.5.0 GHz**

Overall IF/IF Specifications:

IF standard frequency	**1100 ÷ 1400 MHz synthesized, 100.or 125 KHz steps**
IF standard group delay (IF ± 8 MHz)	**≤ 1.5 ns**
2nd IF (optional)	**70 MHz**
2nd IF group delay (70 MHz ± 8 MHz)	**≤ 3 ns**

Overall BB/BB Specifications (-43 dBm at receiver input):

BB amplitude frequency response (5 Hz ÷ 9.1 MHZ)	**within 1 dB**
Video amplitude frequency response (5 Hz ÷ 5 MHz)	**within 0.5 dB**
Group delay in video band (5 Hz ÷ 5 MHz)	**within 20 ns**
Differential gain	**≤2 %**
Differential phase	**≤ 2°**
Audio channels frequency response (30 Hz ÷15 kHz)	**within 0.5 dB**
Audio channels THD (at 400 Hz)	**≤ 0.1 %**

IF modulator Characteristics (with the standard IF):

Modulation	**CCIR 405/1**
Frequency deviation	**± 8 MHz pp**
IF output level	**+ 5 dBm + 0.5 dB (50 W)**
IF+ 24 VDC output connector	**N female**
Modulation linearity (IF ± 8 MHz)	**≤0.5 %**
BB/Video input level	**1 Vpp: ± 1 dB (75 W unbal)**
Video input connector	**BNC**

Video preemphasis (bypassable)	**C.C.I.R. 625 lines**
Audio input level (Df = 70 kHz pp)	**-6 ÷ + 12 dBm (600 W bal/unbal)**
Audio input connector	**XLR female**
Audio pre-emphasis (bypassable)	**50 mS**
Audio subcarrier frequencies	**7020, 7500, 8065, 8590 MHz**
Power supply	**AC 110/220/240:t 15%, 50/60 Hz**

IF demodulator Characteristics (with the standard IF):

IF input level	**-40 ÷ + 5 dBm (50 W)**
IF+ 24 VDC input connector	**N female**
Video de-emphasis (bypassable)	**C.C.I.R. 625 lines**
BB/Video output level	**1 Vpp: ± 1 dB (75 W unbal)**
Video output connector	**BNC**
Audio output level (Df = 70 kHz pp)	**-6 ÷ + 12 dBm (600 W bal/unbaL)**
Audio de-emphasis (bypassable)	**50 mS**
Power supply	**AC 110/220/240:t 15%, 50/60 Hz**

Outdoor transmitter:

IF standard input frequency	**1100 ÷ 1400 MHz**
2nd IF input frequency (optional)	**70 MHz**
IF input levels	**-3 ÷ +5 dBm (50 W)**
Output power and frequency range	**see above**
Spurious attenuation	**> 60 dB**
Frequency stability	**standard ± 35 ppm, optional ± 5 or ± 10 ppm (-20°÷ +50° C)**
Power supply	**24 VDC ± 10%**

Outdoor receiver:

RF input level	**-35 ÷ 80 dBm (50 W)**
lst IF frequency	**1100 ÷ 1400 MHz**
2nd IF frequency	**70 MHz**
IF output levels	**- 40 ÷ +5 dBm**

Receiver noise figure	**≤ 8 dB (5 dB typ.)**
Image frequency suppression	**≥ 65 dB**
Power supply	**24 VDC ± 10%**

Transmitter/receiver general data:

Outdoor operating temperature range	**-20 ÷ +50 °C**
Outdoor operating humidity range	**≤ 95 %**

Mechanical characteristics:

MMT,DMT:	**Standard 19", 1U, depth 380 mm**
HMT,HMR outdoor boxes	**315x265x125 mm**
HMT/IN,HMR/IN indoor boxes	**Standard 19", 2 U, depth 380 mm**