

1.3 Technical Data

1.3.1 Electrical Data

The electrical data are measured at ambient temperature $25\text{ }^{\circ}\text{C} \pm 15\text{ }^{\circ}\text{C}$.

Frequency range:	1.5 MHz to 30 MHz (1 MHz to 30 MHz extendable)
Input	
– Tolerated overvoltage:	up to 30 V EMF
– Impedance:	50 Ohms, coaxial
– Standing wave ratio VSWR, (for 50 Ohms):	typical value 1.5 maximum value 2.5
Back-attenuation from outputs to input:	greater than 40 dB
Outputs	
– Number of outputs:	12 (34 in cascaded connection of 19" combination)
– Impedance:	50 Ohms coaxial
– Standing wave ratio VSWR, (for 50 Ohms):	typical value 1.1 maximum value 1.2
Decoupling attenuation between any two receivers:	greater than 35 dB (typically 40 dB)
Gain:	$1.0\text{ dB} \pm 0.5\text{ dB}$
Threshold sensitivity:	$\cong 5.5\text{ kTo}$ (at $f = 30\text{ MHz}$)
Linear selectivity	
Attenuation of frequencies under 1.3 MHz and above 40 MHz:	$\cong 35\text{ dB}$
Phase matching:	$\cong \pm 1.5^{\circ}$ (only for V 1275 H–P)
Gain matching:	$\cong \pm 0.25\text{ dB}$ (only for V 1275 H–P)
Intermodulation rejection	
Rejection of second and third order com- bination frequencies, with respect to the input level of two equal magnitude inputs of 0 dBm:	$IM_2 = -80\text{ dB}$, $IM_3 = -68\text{ dB}$
IPIP, 3rd order:	34 dBm
IPIP, 2nd order:	80 dBm
Linear drive limit:	1 dB limiting of output signal requires more than 10 V input EMF
Cross-modulation rejection:	An unmodulated wanted transmission with $100\text{ }\mu\text{V}$ EMF suffers not more than 10% cross-modulation from an interfering transmission with 50% modulation depth and up to 2 V EMF.