TABLE 1-2: TYPICAL UP CONVERTER SPECIFICATIONS

Output Frequency: (in 2.5 MHz steps)	*5845-6425 MHz, ±18 MHz (Optional) UC6L-D4/575 5925-6425 MHz, ±18 MHz (Standard) UC6L-D4
Input Frequency:	70 MHz, ±18 MHz
Type	Dual Conversion
Frequency Sense:	Positive (No inversion)
IF Frequency:	1190 MHz
Phase Noise:	8 Hz RMS (max) for 10 Hz -10 KHz carrier offset. 15 Hz RMS (max) for 10 KHz -10 MHz carrier offset.
Output Level: (1 dB compression)	-5 dBm min.
Local Oscillator Leakage:	At output -70 dBm (max)
Input Impedance:	75 Ω BNC Connector
Output Impedance:	50 Ω Type N Connector
Input Return Loss:	26 dB (typ), 23 dB (min)
Output Return Loss:	23 dB (typ), 20 dB (min)
Frequency Stability:	±200 Hz/Mo.
Gain Slope:	±0.1 dB/MHz
IF to RF Gain:	10 dB (min), 20 dB (typ)
Gain Stability:	±0.25 dB/day (max)
AM to PM Conversion	0.1°/dB (max) at -22 dBm out

3 GENERAL ELECTRICAL DESCRIPTION

The UC6L-D4 Frequency Converter unit is designed to be completely self contained, including power supplies, highly stable local oscillator sources, RF frequency conversion components and operational monitoring circuitry for all major subassemblies. The monitoring capabilities are presented in the form of front panel illuminated indicators and test points, as well as a rear panel connector supplying the user with a form C relay closure for the purpose of remote alarm summation. The dual frequency conversion scheme is accomplished by the use of two crystal oscillator referenced phase locked oscillator multiplier chains. The output frequencies of the local oscillators are presented as front panel BNC connectors and may be used for monitoring purposes. The frequency of the second (RF) local oscillator is synthesized and tunable in 2.5 MHz increments to allow for carrier agility across the *5.845 to 6.425 GHz transmit band. The first (IF) local oscillator is designed to be a fixed frequency resonant cavity mechanically tuned type device. Front panel pushbutton "MODE" selector switches allow the unit to be placed in a manual (Local) command status, or in a remote status in which the unit is commanded via rear panel RS422 interface connector J4. The frequency converter unit is prewired for operation at either 115 VAC or 230 VAC. Internal jumpers allow changing between 115 V and 230 V. The power requirement at 115 VAC is approximately 150 W reducing to approximately 100 W after warm up.

4 INSTALLATION

There are no special requirements for mounting the model UC6L-D4 frequency converter. The unit may be mounted into a standard equipment rack utilizing the supplied slide mounts, or by placing the converter on a suitable equipment support shelf. The mounting ears are not intended to support the equipment weight, but to fasten the converter unit to the rack with suitable fasteners.