

U450 Series S-band Upconverters

INPUT SPECIFICATION		Options
1. Frequency range:	70 ± 20MHz or 140 ± 40MHz (check model table)	
2. Connector:	BNC	TNC
3. Impedance:	50Ω	75Ω
4. Return loss:	≥15dB	≥20dB (*)

OUTPUT SPECIFICATION	
5. Frequency range:	1,750 to 2,900MHz (check model table)
6. Connector:	N-type SMA
7. Impedance:	50Ω
8. Return loss:	≥15dB
9. 1dB compression point:	+10dBm
10. Third order intercept::	+20dBm

TRANSFER CHARACTERISTICS	
11. Gain:	0 to 30dB, adjustable in 0.1dB steps
12. Gain ripple:	over ±20MHz: ≤1dB p.t.p. over input band: ≤3dB p.t.p.
13. Group delay distortion:	over ±5MHz <2ns over ±20MHz <5ns
14. Gain stability, 0°C to 50°C:	±1dB
15. Frequency stability, 0°C to 50°C:	2 x 10 ⁻⁷ Option 1: 10⁻⁷ Option 2: 10⁻⁸ Option 3: 3 x 10⁻⁹
16. External reference:	10MHz, 0dBm 5MHz, 0dBm
17. Synthesiser step size:	1kHz
18. Noise figure (full gain):	<20dB

Spurii	
19. Image rejection:	>75dB
20. In-band spurii (at 0dBm output):	<-60dBc

PHASE NOISE	
21. 10Hz:	<-60dBc/Hz
22. 100Hz:	<-75dBc/Hz
23. 1kHz:	<-80dBc/Hz
24. 10kHz:	<-85dBc/Hz
25. 100kHz:	<-95dBc/Hz
26. 1MHz:	<-110dBc/Hz
27. Mains related:	<-60dBc

MISCELLANEOUS	
28. Power supply:	115V/230V ±10% 50/60Hz ±10%, 30VA
29. Mechanical:	1U 19" frame, 400mm deep
30. Temperature:	Operating: 0° to 50°C Storage: -40° to 85°C
31. Relative humidity:	Operating: 0 to 90% Storage: 0 to 95%
32. Summary alarm:	NO and NC dry relay contacts via rear mounted connector
33. Summary alarm indication:	Front panel LED
34. Remote control:	RS232/RS485 serial interface

(*) Noise figure increases by 3dB, overall gain decreases by 3dB.

MODEL TABLE

Output Frequency	Input frequency and bandwidth		
	70 ± 20MHz	140 ± 40MHz	70 ± 20MHz, 140 ± 20MHz and ±40MHz
2.00 - 2.10GHz	U1450	U1455	U1470
2.00 - 2.30GHz	U450	U455	U470
2.29 - 2.81GHz	U454	U459	U474