

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 ⁽¹⁾

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		0 to 40dB
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		10dB typ. ⁽²⁾

Spurii	
19. Image rejection:	>80dB
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 Ethernet

⁽¹⁾ Noise figure increases by 3dB, overall gain decreases by 3dB.

⁽²⁾ This option requires 40dB gain.

MODEL TABLE

Output Frequency	Input frequency and bandwidth		
	70 ± 20MHz	140 ± 40MHz	70 ± 20MHz, 140 ± 20MHz and ±40MHz
2.00 - 2.40GHz	U492	U497	U498
2.40 - 2.50GHz	U491	U496	U499

Frequency output range of these models may be restricted to a narrower band if required.

Other bands within 1,750 to 2,900MHz are possible on request. Consult sales office for prices and other details.