

U690 Series Extended X-band Upconverters

INPUT SPECIFICATION		Options
1. Frequency range:	70 ± 20MHz or 140 ± 40MHz	(check model table)
2. Connector:	BNC	
3. Impedance:	50Ω	75Ω
4. Return loss:	≥15dB)
OUTPUT SPECIFICATION		
5. Frequency range:	Any 1GHz or 2GHz within 7.0 to 9.0GHz	(check model table)
6. Connector:	N-type	SMA
7. Impedance:	50Ω	
8. Return loss:	≥20dB	
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 ±40MHz: ≤1.5dB p.t.p.	
	over output band: ≤4dB 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, -10°C to +60°C:	1x10 ⁻⁷ from 0°C to +50°C	
	1x10 ⁻⁸ at constant temperature over 24 hrs.	
16. External reference:	10MHz, 0dBm	5MHz, 0dBm
17. Synthesiser step size:	1kHz	
18. Noise figure (full gain):	<20dB	
Spurii		
19. Image rejection:	>50dB	
20. In-band spurii (at 0dBm output):	<-55dBc	
PHASE NOISE		
21. 10Hz:	<-45dBc/Hz	
22. 100Hz:	<-70dBc/Hz	
23. 1kHz:	<-80dBc/Hz	
24. 10kHz:	<-85dBc/Hz	
25. 100kHz:	<-95dBc/Hz	
26. 1MHz:	<-110dBc/Hz	
27. Mains related:	<-50dBc	
MISCELLANEOUS		
28. Power supply:	115V/230V ±10%	
	50/60Hz ±10%, 50VA	
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:	<ul style="list-style-type: none"> ● RS232 or RS422/RS485, connector D-type 9P F ● SNMP and HTTP over TCP/IP Ethernet, connector RJ45 	

MODEL TABLE

Output Frequency	Input frequency and bandwidth		
	70 ± 20MHz	140 ± 40MHz	70 ± 20MHz, 140 ± 20MHz and ±40MHz
7.0 - 8.0	U690-1	U691-1	U692-1
8.0 - 9.0	U690-2	U691-2	U692-2
7.0 - 9.0	U690-3	U691-3	U692-3
8.1 - 8.6	U690-4	U691-4	U692-4
7.240-7.250	U690-5	U691-5	U692-5
7.0 - 7.5	U690-6	U691-6	U692-6
7.145-7.235	U691-X	230 +/- 20 MHz	