

## U350 Series L-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:	950 to 2,150MHz (check model table)
6. Connector:	N-type <span style="float: right;">SMA</span>
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:	<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">over ±20MHz:</div> <div style="width: 55%;">≤1dB p.t.p.</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">over input band:</div> <div style="width: 55%;">≤3dB p.t.p.</div> </div>
13. Group delay distortion:	<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">over ±5MHz</div> <div style="width: 55%;">&lt;2ns</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">over ±20MHz</div> <div style="width: 55%;">&lt;5ns</div> </div>
14. Gain stability, 0°C to 50°C:	±1dB
15. Frequency stability, 0°C to 50°C:	<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">2 x 10<sup>-7</sup></div> <div style="width: 35%;">           Option 1: 10<sup>-7</sup>            Option 2: 10<sup>-8</sup>            Option 3: 3 x 10<sup>-9</sup> </div> </div>
16. External reference:	10MHz, 0dBm <span style="float: right;">5MHz, 0dBm</span>
17. Synthesiser step size:	1kHz
18. Noise figure (full gain):	<15dB

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:	<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Operating:</div> <div style="width: 55%;">0° to 50°C</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Storage:</div> <div style="width: 55%;">-40° to 85°C</div> </div>
31. Relative humidity:	<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Operating:</div> <div style="width: 55%;">0 to 90%</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Storage:</div> <div style="width: 55%;">0 to 95%</div> </div>
32. Summary alarm:	NO and NC dry relay contacts via rear mounted connector
33. Summary alarm indication:	Front panel LED
34. Monitoring and remote control:	<ul style="list-style-type: none"> <li>RS232 or RS422/RS485, connector D-type 9P F</li> <li>Serial emulation over TCP/IP, connector RJ-45</li> <li>SNMP and HTTP over TCP/IP Ethernet, connector RJ-45</li> </ul>

(\*) 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
950 - 1,750MHz	U350	U355	U370
950 - 2,150MHz	U351	U356	U371