

## BD600 Series X-band Block downconverters

INPUT SPECIFICATION		Options
1. Frequency range:	7.25 to 7.75GHz	
2. Connector:	SMA	N-type
3. Impedance:	50Ω	
4. Return loss:	≥20dB	
OUTPUT SPECIFICATION		
5. Frequency range:	950 to 1,450MHz	
6. Connector:	SMA	N-type
7. Impedance:	50Ω	
8. Return loss:	15dB typical	≥20dB (*)
9. 1dB compression point:	+10dBm	
10. Third order intercept:	+20dBm	
TRANSFER CHARACTERISTICS		
11. Gain:	25dB	
12. Gain ripple:	over ±20MHz: ≤1dB p.t.p. over input band: ≤3dB p.t.p	
13. Gain stability, 0°C to 50°C:	±1dB	
14. Gain slope:	≤0.02dB/MHz	
15. Noise figure:	16dB typical	
LOCAL OSCILLATOR		
16. Local oscillator frequency:	6.3GHz or 8.7GHz (check model table)	
17. Frequency stability, 0°C to 50°C:	2 x 10 <sup>-7</sup>	Option 1: 10 <sup>-7</sup> Option 2: 10 <sup>-8</sup> Option 3: 3 x 10 <sup>-9</sup>
18. External reference:	10MHz, 0dBm	5MHz, 0dBm
Spurii		
19. Image rejection:	>75dB	
20. In-band spurii (at 0dBm output):	<-60dBc	
21. Out of band Spurii:	≤-40dBm	
PHASE NOISE		
22. 10Hz:	<-45dBc/Hz	
23. 100Hz:	<-70dBc/Hz	
24. 1kHz:	<-80dBc/Hz	
25. 10kHz:	<-85dBc/Hz	
26. 100kHz:	<-95dBc/Hz	
27. 1MHz:	<-110dBc/Hz	
28. Mains related:	<-60dBc	
MISCELLANEOUS		
29. Power supply:	115V/230V ±10% 50/60Hz ±10%, 30VA	
30. Mechanical:	1U 19" frame, 400mm deep	
31. Temperature:	Operating: 0° to 50°C Storage: -40° to 85°C	
32. Relative humidity:	Operating: 0 to 90% Storage: 0 to 95%	
33. Summary alarm:	NO and NC dry relay contacts via rear mounted connector	
34. Summary alarm indication:	Front panel LED	

(\*) Output compression point and overall gain decrease by 3dB.

### MODEL TABLE

	Input Frequency	Output Frequency	Local Oscillator
BD651	7.25 - 7.75GHz	950 - 1,450MHz	6.3GHz
BD661	7.25 - 7.75GHz	950 - 1,450MHz	8.7GHz (*)
BD65	RF specifications identical to BD651. Unit fitted inside IP67 box, dimensions 220x145x55mm. DC power (17 to 24V), 10MHz locking reference and alarm pulses via L-band interface connector.		
BD66	RF specifications identical to BD661. Unit fitted inside IP67 box, dimensions 220x145x55mm. DC power (17 to 24V), 10MHz locking reference and alarm pulses via L-band interface connector.		

(\*) These units use "high side LO" and therefore invert signal spectrum.