

T665

X-band Test Loop Translator

Input Specification

- | | |
|---------------------|---------------|
| 1. Frequency range: | 7.9 to 8.4GHz |
| 2. Level: | 0dBm maximum |
| 3. Connector: | N-type |
| 4. Impedance: | 50Ω |
| 5. Return loss: | >15dB |

Output specification

- | | | |
|----------------------------|--|--|
| 6. Frequency range: | 7.25 to 7.75GHz
or
7.175 to 7.675GHz | selectable from front panel
or remote interface |
| 7. Connector: | N-type | |
| 8. Impedance: | 50Ω | |
| 9. Return loss: | ≥15dB | |
| 10. 1dB compression point: | -10dBm | |

Transfer characteristics

- | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|---|------|-----------|-------|-----------|------|-----------|-------|-----------|--------|-----------|------|------------|---------------|--------|
| 11. Gain: | -30dB | | | | | | | | | | | | | | | |
| 12. Gain adjustment: | ±15dB | adjustable from front panel
and remote interface | | | | | | | | | | | | | | |
| 13. Gain ripple: | Over ±20MHz:
Over output band: | <1dB p.t.p.
<3dB p.t.p. | | | | | | | | | | | | | | |
| 14. Frequency translation: | Dual translation via L-band with “co-related” LOs:
Downconversion LO: 6.9GHz
Upconversion LO: 6.250GHz
or
6.175GHz | | | | | | | | | | | | | | | |
| 15. LO stability: | 2 x 10 ⁻⁷ from 0°C to 50°C
Ageing: 10 ⁻⁶ per year | | | | | | | | | | | | | | | |
| 16. Phase noise: | <table border="0"> <tr> <td>10Hz</td> <td>-50dBc/Hz</td> </tr> <tr> <td>100Hz</td> <td>-70dBc/Hz</td> </tr> <tr> <td>1kHz</td> <td>-80dBc/Hz</td> </tr> <tr> <td>10kHz</td> <td>-90dBc/Hz</td> </tr> <tr> <td>100kHz</td> <td>-95dBc/Hz</td> </tr> <tr> <td>1MHz</td> <td>-105dBc/Hz</td> </tr> <tr> <td>Mains related</td> <td>-50dBc</td> </tr> </table> | | 10Hz | -50dBc/Hz | 100Hz | -70dBc/Hz | 1kHz | -80dBc/Hz | 10kHz | -90dBc/Hz | 100kHz | -95dBc/Hz | 1MHz | -105dBc/Hz | Mains related | -50dBc |
| 10Hz | -50dBc/Hz | | | | | | | | | | | | | | | |
| 100Hz | -70dBc/Hz | | | | | | | | | | | | | | | |
| 1kHz | -80dBc/Hz | | | | | | | | | | | | | | | |
| 10kHz | -90dBc/Hz | | | | | | | | | | | | | | | |
| 100kHz | -95dBc/Hz | | | | | | | | | | | | | | | |
| 1MHz | -105dBc/Hz | | | | | | | | | | | | | | | |
| Mains related | -50dBc | | | | | | | | | | | | | | | |
| 17. External reference: | 10MHz, 0dBm | | | | | | | | | | | | | | | |
| 18. In-band spurious (at 0dBm input): | <-60dBm | | | | | | | | | | | | | | | |

Miscellaneous

- | | | |
|----------------------------------|--|---|
| 19. Power supply: | 115V/230V ±10%
50/60Hz ±10%, 30VA | |
| 20. Mechanical: | 1U 19" frame, 400mm deep | |
| 21. Temperature: | Operating: | 0° to 50°C |
| | Storage: | -40° to 85°C |
| 22. Relative humidity: | Operating: | 0 to 90% |
| | Storage: | 0 to 95% |
| 23. Summary alarm: | NO and NC dry relay contacts via rear
mounted connector | |
| 24. Summary alarm indication: | Through front panel LED | |
| 25. Remote Monitoring & Control: | RS232/RS485 serial interface | |
| | Control: | Gain and frequency translation |
| | Monitor: | Gain, frequency translation
and alarm status |