



AVAILABLE SATELLITE BANDS

Band	Input Frequency (GHz)	Output Frequency (GHz)
C	5.845–6.425	3.62–4.2
X	7.9–8.4	7.25–7.75
Ku	14–14.5	7.25–7.675
		12.25–12.75
		11.7–12.2
Ka	30–31	11.45–11.95
		10.95–11.45
		20.2–21.2

PORTABLE SATELLITE TEST TRANSLATORS



FEATURES

- High frequency stability
- Minimum amplitude and delay distortion
- Low intermodulation distortion
- Low phase noise contribution
- 30 dB level control
- Portable suitcase style
- Single-, dual-, tri- and quad-band units
- Silver aluminum finish

This series of test translators is designed to translate the C-, X-, Ku- and Ka-band satellite communications frequency transmit bands to their respective receive frequency bands. This series of test translators is available in single-, dual-, tri- and quad-band configurations. All translators are built in a convenient "suitcase" style package. The 3BU series features the translations for C-, X- and Ku-bands while the 4BU series also includes Ka-band.

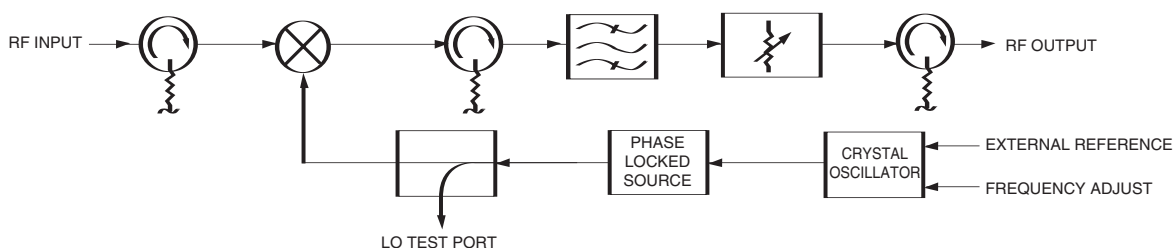
SPECIFICATIONS

MODEL NUMBERS	BAND	RF INPUT FREQUENCY (GHz)	LO FREQUENCY (GHz)	RF OUTPUT FREQUENCY (GHz)
SINGLE-BAND				
DNT-1BU-1	C	5.845-6.425	2.225	3.62-4.2
DNT-1BU-2	X	7.9-8.4	0.650	7.25-7.75
DNT-1BU-3	X	7.9-8.4	0.725	7.25-7.675
DNT-1BU-4	Ku	14-14.5	1.750	12.25-12.75
DNT-1BU-5	Ku	14-14.5	2.300	11.7-12.2
DNT-1BU-6	Ku	14-14.5	2.550	11.45-11.95
DNT-1BU-7	Ku	14-14.5	3.050	10.95-11.45
DNT-1BU-8	Ka	30-31	9.800	20.2-21.2
DUAL-BAND				
DNT-2BU-1	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.650	7.25-7.75
DNT-2BU-2	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.725	7.25-7.675
DNT-2BU-3	1	5.845-6.425	2.225	3.62-4.2
	2	14-14.5	1.750	12.25-12.75
DNT-2BU-4	1	5.845-6.425	2.225	3.62-4.2
	2	14-14.5	2.300	11.7-12.2
DNT-2BU-5	1	5.845-6.425	2.225	3.62-4.2
	2	14-14.5	2.550	11.45-11.95
DNT-2BU-6	1	5.845-6.425	2.225	3.62-4.2
	2	14-14.5	3.050	10.95-11.45
DNT-2BU-7	1	5.845-6.425	2.225	3.62-4.2
	2	30-31	9.800	20.2-21.2
TRI-BAND				
DNT-3BU-1	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.650	7.25-7.75
	3	14-14.5	1.750	12.25-12.75
DNT-3BU-2	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.650	7.25-7.75
	3	14-14.5	2.300	11.7-12.2
DNT-3BU-3	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.650	7.25-7.75
	3	14-14.5	2.550	11.45-11.95
DNT-3BU-4	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.650	7.25-7.75
	3	14-14.5	3.050	10.95-11.45
DNT-3BU-5	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.725	7.25-7.675
	3	14-14.5	1.750	12.25-12.75
DNT-3BU-6	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.725	7.25-7.675
	3	14-14.5	2.300	11.7-12.2
DNT-3BU-7	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.725	7.25-7.675
	3	14-14.5	2.550	11.45-11.95
DNT-3BU-8	1	5.845-6.425	2.225	3.62-4.2
	2	7.9-8.4	0.725	7.25-7.675
	3	14-14.5	3.050	10.95-11.45

SPECIFICATIONS (CONT.)

MODEL NUMBERS	BAND	RF INPUT FREQUENCY (GHz)	LO FREQUENCY (GHz)	RF OUTPUT FREQUENCY (GHz)
QUAD-BAND				
DNT-4BU-1	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.650	7.25–7.75
	3	14–14.5	1.750	12.25–12.75
	4	30–31	9.800	20.2–21.2
DNT-4BU-2	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.650	7.25–7.75
	3	14–14.5	2.300	11.7–12.2
	4	30–31	9.800	20.2–21.2
DNT-4BU-3	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.650	7.25–7.75
	3	14–14.5	2.550	11.45–11.95
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DNT-4BU-4	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.650	7.25–7.75
	3	14–14.5	3.050	10.95–11.45
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DNT-4BU-5	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.725	7.25–7.675
	3	14–14.5	1.750	12.25–12.75
	4	30–31	9.800	20.2–21.2
DNT-4BU-6	1	5.845–6.425	2.225	3.62–4.2
	2	7.9–8.4	0.725	7.25–7.675
	3	14–14.5	2.300	11.7–12.2
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FUNCTIONAL BLOCK DIAGRAM



PHASE NOISE (MAXIMUM)

Offset (Hz)	Below 3.1 GHz (dBc/Hz)	9.8 GHz (dBc/Hz)
10	-63	-48
100	-78	-73
1K	-94	-103
10K	-110	-112
100K	-130	-118
1M	-145	-138

PORTABLE SATELLITE TEST TRANSLATORS

FUNCTIONAL

Conversion loss.....	18 dB maximum, 15 dB typical
Amplitude response.....	±0.25 dB over any 40 MHz, ±1.0 dB over any band
Input/output return loss	18 dB minimum (50 ohms)
Level control.....	30 dB minimum
Input/output isolation	60 dB minimum
Intermodulation distortion	With two inband input signals at -13 dBm, third order intermodulation products are less than 50 dBc.
Frequency stability	±2 x 10 ⁻⁶ /day (0 to 50°C)

PRIMARY POWER REQUIREMENTS

Voltage	90–250 VAC
Frequency	47–63 Hz
Power consumption.....	25 W typical 30 W typical for 4BU Series

PHYSICAL

Weight	20 pounds (1.4 kg) typical
Overall dimension.....	6" x 13" x 18"
Connectors	
C-, X- and Ku-band.....	SMA female
Ka-band input	K female
Ka-band output	SMA female
LO monitors	SMA female
AC input.....	IEC-320

ENVIRONMENTAL

Operating	
Temperature.....	0 to 50°C
Relative humidity	Up to 95% at 30°C
Atmospheric pressure.....	Up to 10,000 feet
Nonoperating	
Temperature.....	-50 to +70°C
Relative humidity	Up to 95% at 40°C
Atmospheric pressure.....	Up to 40,000 feet
Shock and vibration	Normal handling by commercial carriers

OPTIONS

Available paint colors:

Monarch Black.....	FED-STD-595B color 27038
Green 383	FED-STD-595B color 34094
Desert Tan	FED-STD-595B color 33303



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