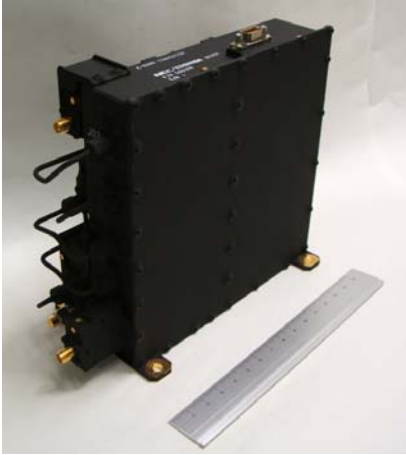


# Heritage Receiver/Downconverter Line Up

## C-band Downconverter



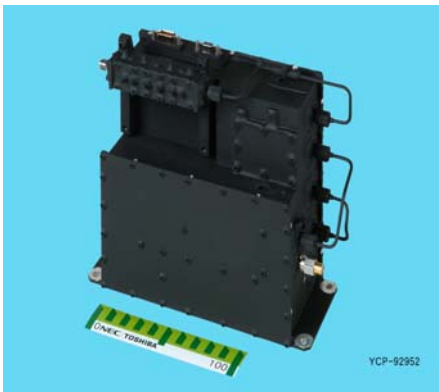
### Specification Table

Parameter	Unit	Typical Performance
RF Frequency	GHz	5.925 to 6.425 (Type1), 6.425 to 6.725 (Type2)
IF Frequency	GHz	3.7 to 4.2 (Type1), 3.4 to 3.7 (Type2)
LO Frequency	GHz	2.225 (Type1), 3.025 (Type2)
Usable Bandwidth	MHz	500 (Type1), 300 (Type2)
Gain	dB	24.5 nom.
Gain Flatness	dBp-p	0.8 max. (over operational bandwidth)
Noise Figure	dB	20 max. (Over AT and EOL)
C/3IM	dBc	-47 max (Pin = -16dBm each)
In-Band Spurious	dBc	-65 max.
Frequency Stability	ppm	+/-1 max. (Initial setting) +/-2 max. (Over Diurnal) +/-3.5 max. (Over AT & Life w/o initial setting)
Phase Noise	dBc/Hz	@10Hz -50 max.
@100Hz		-70 max.
@1kHz		-100 max.
@10kHz		-110 max.
@100kHz		-110 max.
@1MHz		-120 max.
@10MHz	-120 max.	
DC Power Consumption	W	7.5 max.
Mass	kg	1.01 max.
Temperature Range	degC	+5 to +66 (AT), -5 to +76 (QT)

### Main Characteristics

- o C-band DNC consists of an RF Section, a Local Oscillator and a DC/DC Converter.
- o RF Section converts the 6GHz input signals to the 4GHz signals using Local signal of 2.225GHz(Type 1) and 3.025GHz(Type 2).
- o Local Oscillator provides the Local signal to the Mixer of the RF Section. TCXO is used for Local signal reference source.
- o DC/DC Converter supplies the secondary voltage to the RF Section and the Local Oscillator. And it receives the Turn ON and OFF commands and provide the ON/OFF Status telemetry.
- o Typical performance of C-band DNC is as follows;  
Gain: 24.5dB nom. / NF: 20dB max. / IP3: +32.5dBm min. / Pdc: 7.5W max.

## X-band Downconverter



### Specification Table

Parameter	UNIT	Meajor Performance
RF FREQ	GHz	7.9 to 8.4
IF FREQ	GHz	7.25 to 7.75
LO FREQ	MHz	650
Usable Bandwidth	MHz	500
Gain	dB	15 min
Gain Flatness	dBp-p	0.75/500MHz
Noise Figure	dB	27.5max
C/3IM	dBc	-51 at Pin= -9dBm (OICP=+33dBm)
In-Band Spurious	dBc	-65
Out of Band Spurious	dBc	RF-3*LO -35
2*Fout		-30
RF-2*LO, RF+LO		-10
RF Leakage		-9
11*LO, 12*LO		-35
Frequency Stability	ppm	Setting +/-1.0
		Over 15°C +/-1.0
		Over Life +/-4.0
Phase Noise	dBc/Hz	10Hz -60 max
100Hz		-83 max
10KHz		-103 max
1MHz		-130 max
Power Consumption	W	16 max. (Using TCXO)
Dimension	mm	170x64x147
Mass	g	885 max
Temperature Range	°C	-10 to +60

### Main Characteristics

- o Down conversion of RF Signal  
Input Frequency Range: 7.9GHz to 8.4GHz  
Output Frequency Range: 7.25GHz to 7.75GHz  
Local Frequency: 650MHz
- o X-band DNC consists of an RF Section, a Local Oscillator and a DC/DC Converter.
- o Self gain compensation over temperature using the variable gain MMIC AMP.
- o The secondary voltage supply (+5V, -5V) for X-band LNA.
- o High Linearity