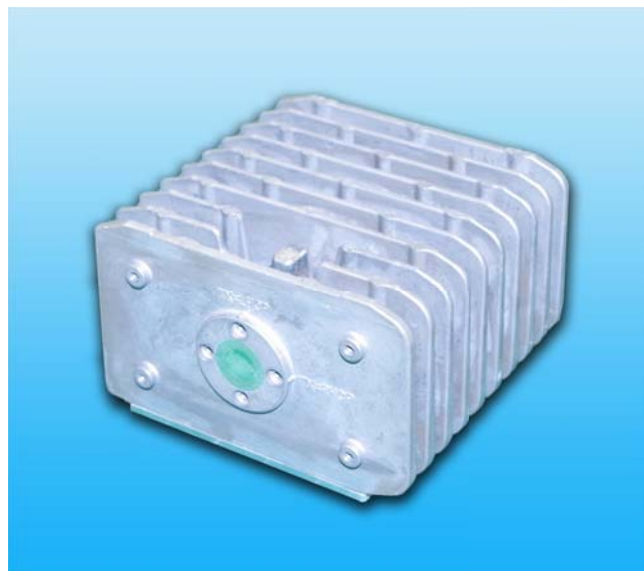


## MODEL No. NJT5853

The Unit (3W Ka-band SSPA with Upconverter, K-band Low Noise Block Downconverter) upconverts L-band IF signal to Ka-band RF signal (29.5 to 30.0 GHz), transmits with 3W (+35 dBm) output power and downconverts K-band RF signal (19.2 to 20.2 GHz) to L-band IF signal with low noise amplifiers.

### < Features >

- \* **RF Frequency:**
  - TX: 29.5 to 30.0 GHz with 28.55 GHz LO
  - RX: 19.2 to 20.2 GHz with 18.25 GHz LO
- \* **High Efficiency Output Power**
  - Saturation Output Power: +35 dBm (3W)
  - Power Consumption: 35 W max.
- \* **OMT and TRF Equipped**
  - Noise Figure: 1.6 dB max. including OMT+TRF
  - Tx-to-Rx Isolation: 80 dBc
  - Polarizer Option
- \* **All-weathered Compact Housing**
  - Dimension: 118 (L) x 120 (W) x 77 (H) mm
  - Weight: 1.8 kg
- \* **Antenna Option**
  - 74 cm Antenna: 44.2 dBi @ 29 GHz
  - 98 cm Antenna: 46.4 dBi @ 29 GHz
  - 120 cm Antenna: 48.9 dBi @ 29 GHz



### < Specifications >

Item		Specifications
TX	RF Frequency	29.5 to 30.0 GHz <b>* Customized Option Frequency Range: 27.0 to 31.0 GHz</b>
	IF Frequency	950 to 1,450 MHz
	Saturation Output Power	+35 dBm min. over temperature
	Linear Gain	64 dB max., 52 dB min.
	L.O. Phase Noise	-60 dBc/Hz @ 100 Hz    -70 dBc/Hz @ 1 kHz    -80 dBc/Hz @ 10 kHz -85 dBc/Hz @ 100 kHz    -110 dBc/Hz @ 1 MHz
	DC Power Requirement	+15 to +30 VDC / 35 W max.
RX	RF Frequency	19.2 to 20.2 GHz <b>* Customized Option Frequency Range: 17.2 to 21.2 GHz</b>
	IF Frequency	950 to 1,950 MHz
	Linear Gain	60 dB max., 50 dB min.
	Noise Figure @ +25 °C	1.6 dB max. including OMT+TRF
	L.O. Stability	+/- 15 ppm max. over temperature
	L.O. Phase Noise	-60 dBc/Hz @ 100 Hz    -75 dBc/Hz @ 1 kHz    -78 dBc/Hz @ 10 kHz -90 dBc/Hz @ 100 kHz    -105 dBc/Hz @ 1 MHz
DC Power Requirement	+12 to +30 VDC / 2 W max.	
OMT & TRF	Insertion Loss	TX: 0.2 dB max. / RX: 0.3 dB max.
	Isolation of TX-RX	80 dB min.
Polarizer (Option)	Frequency	TX: 29.0 to 30.0 GHz / RX: 19.2 to 20.2 GHz
	Axial Ratio	TX: 1.0 dB max. / RX: 1.5 dB max.
Temperature Range (ambient)		Operating: -40 to +60 °C / Storage: -40 to +75 °C
Dimension & Housing		118 (L) × 120 (W) × 77 (H) mm without interface connector and screws
Weight		1.8 kg

\*Note: The contents of this sheet are subject to change without notice.

(1/2)  
Rev.02 Ka-3W-XCVR\_NJT5853

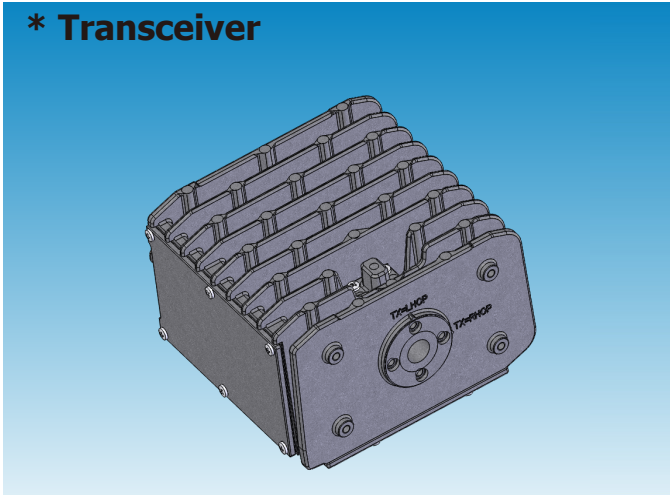
# ■ Ka-band 3W / K-band PLL Transceiver

Under  
Development

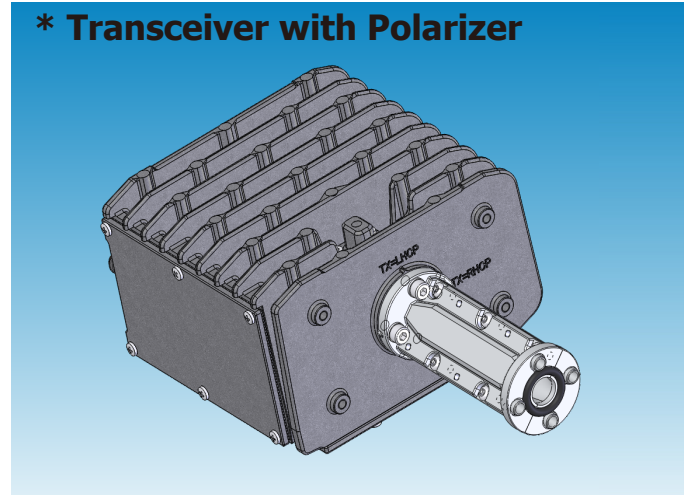
MODEL No. NJT5853

## < Outline >

\* Transceiver

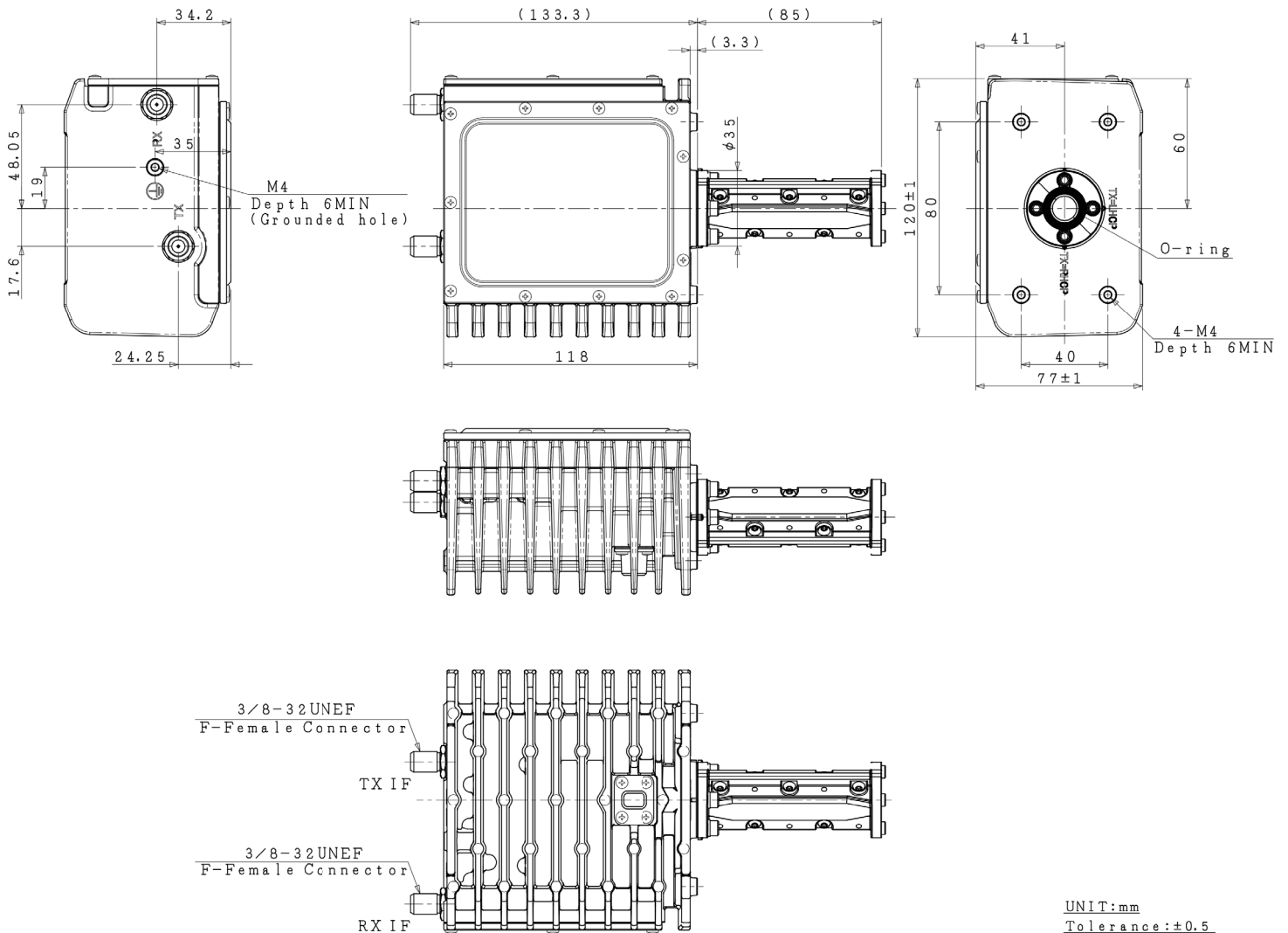


\* Transceiver with Polarizer



## < Drawing >

\* Transceiver with Polarizer



UNIT:mm  
Tolerance:±0.5

\*Note: The contents of this sheet are subject to change without notice.

(2/2)  
Rev.02 Ka-3W-XCVR\_NJT5853