



High-power L-band TRANSCEIVER TYPE MNO-L-1300

Description:

Synthetic aperture radar systems require electronically scanned phased-array antennas, where the transceiver (T/R) module is a key component. Single antenna element or a sector of an antenna having number of elements is fed by a single T/R module that delivers only a fraction of the total power of the radar. Therefore there is no need for a very high power splitting and transmitting circuitry. There is an easy possibility of controlling the phase of the signals at each of the radiating elements electronically by inserting low power phase shifter in each individual transceiver. This allows one to build a radar with electronically scanned beam. Also solid state transmitters are less troublesome for the customer while the large number of transistors within the device guarantee partial operational capabilities even though some elements have been damaged as opposite to the TWT transmitter where the failure of the tube causes shutdown of the radar.

Electric parameters:

Frequency range	[GHz]	1.2 - 1.4
Peak transmit power	[W]	1300 min.
Transmit gain	[dB]	40 min.
Pulse width	[μ s]	20 - 150
Duty factor	[%]	10 max.
Receiver noise factor	[dB]	2.2 max.
Receiver gain	[dB]	20 min.
Input/ output VSWR	[]	1.5 max

Functions:

Mode shifting	transmitting/ receiving
Phase control	6 bits
Temperature monitor	built in
Power monitor	built in

Environmental:

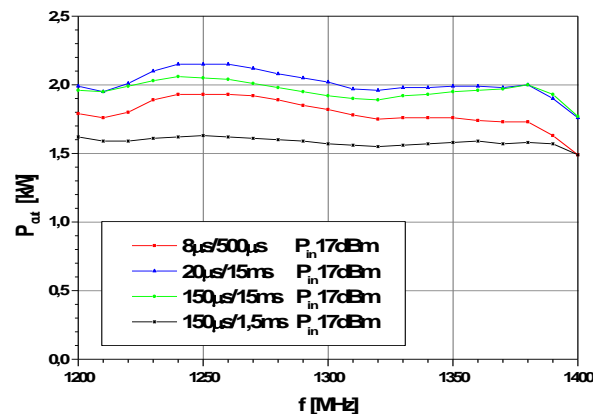
Temperature operating range	-30°C ÷ +55°C
Humidity	98% / +25°C
Vibration	20m/s ² / 30 Hz
Shock	150m/ s ²

Additional information

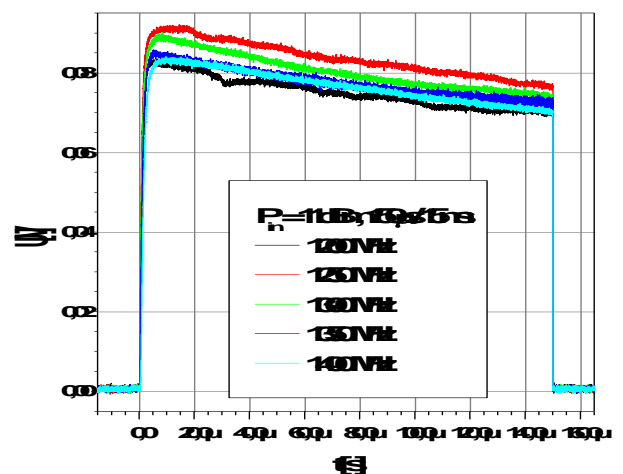
Power consumption	+24 Vdc / 4 A max. +40 Vdc / 15 A avg.
Controlling	RS 485
Diagnostic	CAN
Weight	max. 20 kg
Cooling	liquid
Connectors:	
microwave	N50
supply	LJT 00RT13-04P014
control	LJT 00RT13-37P014
cooling system	DY-N610/1.5



Top view of the MNO-L-1300 transceiver



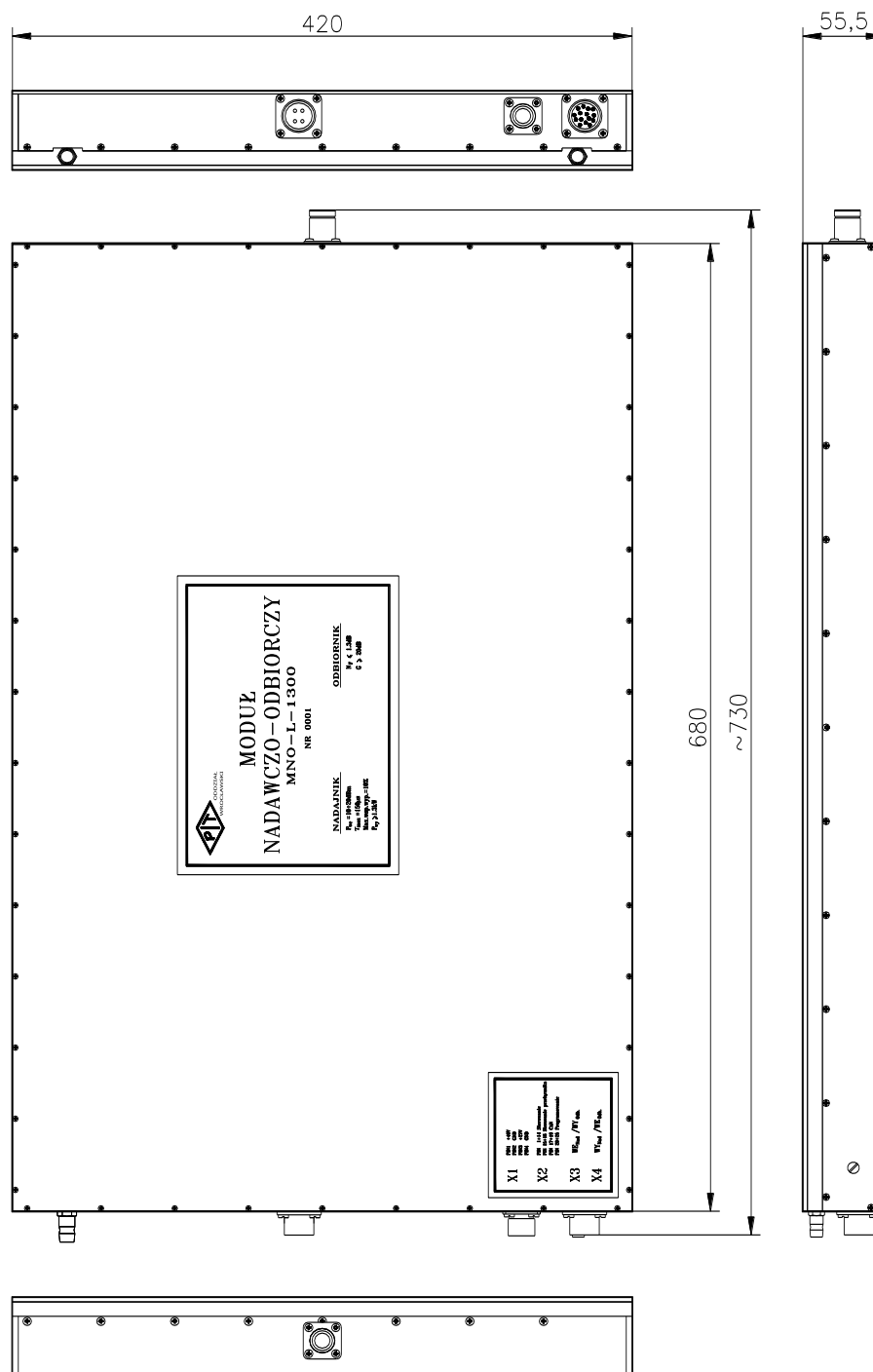
Pulse output power



Output pulse figure

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The mechanical dimensions are for reference only and can be modified. Current detailed outline drawings are available on request. All dimensions are in mm

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