

STANDARD MODELS

Model	Frequency Range	Output Power P_N min / typ W	Gain min / typ dB	Harmonics 2nd / 3rd dBc	Line Power VA	Dimensions (H, D) 19"-System	Weight kg
TWAL 1113-400	10.5 ... 13 GHz	400 / 450	46 / 56 ±10	10 / 20	4000	15 HU, 700 mm	90

1 HU = 44.45 mm

STANDARD SPECIFICATIONS

Input Power:	0 dBm (1 mW) max.
Overdrive Protection:	up to +10 dBm for no damage
Input Impedance:	50 Ohm nominal
Output Impedance:	50 Ohm nominal
Input VSWR:	<2:1 typ.
Load VSWR:	infinite for no damage (100% mismatch tolerant)
	P_N -0.5 dB min. at VSWR 2:1
Spurious (at P_N):	-60 dBc min. (excluding harmonics)
Noise Figure	20 dB max.
Class of Operation:	A-linear

GENERAL

RF Input:	N-f, standard on rear panel
RF Output:	WRD 750, standard on rear panel
Mains Supply:	3x 400 V AC ±10%, 47 ... 63 Hz
Elapsed Time Meter:	via status display
Ambient Temperature:	0 ... 45 °C
Storage Temperature:	-25 ... 85 °C
Relative Humidity:	up to 95% (non-condensing)
Operating Altitude:	up to 2000 m above sea level
Vibration and Shock:	normal laboratory environment
Cooling:	forced air with integral blower air intake and exhaust at rear Option W: Liquid cooling External heat exchanger required

OPTIONS

A) RF Monitor Outputs *)	N) Harmonic Filter *)
B) External Dual Directional Coupler	R) RS-232C/RS-485 Remote Control
C) IEEE-488.2 GPIB Remote Control	S) Internal RF Switching Unit *)
D) Front Panel RF Connectors	U) USB Remote Control
E) RF Power Indication (digital) *)	W) Liquid Cooling

TWAL 10.5 ... 13 GHz TWT Amplifiers

F) Gain Adjustment *)
G) Output Isolator *)
L) Remote Control

X) External Control of other Amplifiers

*) These options may reduce output power and/or gain