

# PULSE POWER AMPLIFIERS

## 1.2 GHz to 1.4 GHz

### Up to 140 KW output power



#### USER BENEFITS

- ✓ High power, high and flat gain
- ✓ Solid state amplifiers
- ✓ High VSWR operation
- ✓ High reliability
- ✓ Wide RF bandwidth
- ✓ Low harmonic distortions
- ✓ Worldwide services

#### AREAS OF APPLICATION

- ✓ EMC tests
- ✓ Radar systems
- ✓ Communications (CDMA,W-CDMA,GSM...)
- ✓ TWT replacement
- ✓ Particules accelerators

#### MAIN CHARACTERISTICS

- ✓ SSxPG-1.2G1.4-x Models are self-contained, forced air cooled (Water cooling on W option), broadband GaN amplifiers
- ✓ The front panel digital display shows forward and reflected pulsed power and system status information's.
- ✓ Standard features include a built-in IEEE-488 and Ethernet interface.
- ✓ Standard 19"
- ✓ Operating temperature 0°C to 35° C (-10 °C to 50°C on T option)
- ✓ Storage temperature -10°C à 50°C (-20 °C to 70°C on T option)
- ✓ Humidity until 95% (non-condensing)

OVERVIEW			
Model	Rated Power (*)	Pulse width	Duty cycle
SSP1-1.2G1.4-A	1kW	0.1-30µs	1%
SSP1-1.2G1.4-B	1kW	0.1-300µs	12%
SSP2-1.2G1.4-A	2kW	0.1-30µs	1%
SSP5-1.2G1.4-A	5kW	0.1-30µs	1%
SSP5-1.2G1.4-B	5kW	0.1-300µs	12%
SSP10-1.2G1.4-A	10kW	0.1-30µs	1%
SSP10-1.2G1.4-B	10kW	0.1-300µs	12%
SSP20-1.2G1.4-A	20kW	0.1-30µs	1%
SSP50-1.2G1.4-A	50kW	0.1-30µs	1%
SSP80-1.2G1.4-A	80kW	0.1-30µs	1%
SSP140-1.2G1.4-A	140kW	0.1-30µs	1%

(\*): Minimum mean power in the pulse, measured on 50 Ohms load, VSWR < 1.3:1

SPECIFICATIONS											
	SSP1-1.2G1.4-A	SSP1-1.2G1.4-B	SSP2-1.2G1.4-A	SSP5-1.2G1.4-A	SSP5-1.2G1.4-B	SSP10-1.2G1.4-A	SSP10-1.2G1.4-B	SSP20-1.2G1.4-A	SSP50-1.2G1.4-A	SSP80-1.2G1.4-A	SSP140-1.2G1.4-A
<b>Pulsed saturated output power</b>											
Minimum (Watts)	1 000	1 000	2 000	5 000	5 000	10 000	10 000	20 000	50 000	80 000	140 000
Typical (Watts)	1 200	1 200	2 300	5 400	5 400	12 500	12 500	23 000	52 000	83 000	146 000
Mini. @3dB compression (Watts)	930	930	1 820	4 550	4 550	9 400	9 400	18 000	45 000	72 000	126 000
Mini. @1dB compression (Watts)	700	700	1 400	3 600	3 600	7 000	7 000	14 000	36 000	58 000	100 000
Input for rated output (dBm)	0	0	0	0	0	10	10	10	10	10	10
<b>Instantaneous frequency response (GHz)</b>											
	1.2 – 1.4										
<b>Gain (dB)</b>											
	60 min.	60 min	63 min	63 min	67 min	60 min	60 min	63 min	67 min	69 min	71,5 min
<b>Flatness (small signal to saturation) (dB)</b>											
	+/- 2 max.										
<b>Gain adjustment (dB)</b>											
	20										
<b>Harmonic distortion at -1 dB compression (dBc)</b>											
	-30 max										
<b>Noise figure (dB)</b>											
	12			15							
<b>Spurious (dBc)</b>											
	<-60										
<b>Typical phase linearity (°/100MHz)</b>											
	+/- 4										
<b>Input impedance (Ω)</b>											
	50										
<b>Output impedance (Ω)</b>											
	50										
<b>Mismatch VSWR tolerance</b>											
	Infinite for any phase, with adjustable foldback protection										
<b>Output RF sample ports (forward &amp; reverse) (dB)</b>											
	50	50	50	60	60	60	60	70	70	70	70

	SSP1-1.2G1.4-A	SSP1-1.2G1.4-B	SSP2-1.2G1.4-A	SSP5-1.2G1.4-A	SSP5-1.2G1.4-B	SSP10-1.2G1.4-A	SSP10-1.2G1.4-B	SSP20-1.2G1.4-A	SSP50-1.2G1.4-A	SSP80-1.2G1.4-A	SSP140-1.2G1.4-A	
<b>Pulse Capability</b>												
Pulse width (µs)	0.1 to 30	0.1 to 300	0.1 to 30	0.1 to 30	0.1 to 300	0.1 to 30	0.1 to 300	0.1 to 30	0.1 to 30	0.1 to 30	0.1 to 30	
Pulse Rate (KHz)	0 to 50											
Duty cycle (%)	1 max.	12 max.	1 max.	1 max.	12 max.	1 max.	12 max.	1 max.	1 max.	1 max.	1 max.	
RF rise and fall (ns)	30 max.											
Pulse off isolation (dB)	80 minimum											
Pulse input	TTL											
Primary power voltage (Vac)	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	Single phase 100-264	three phase 100-264	three phase 100-264
Primary power frequency (Hz)	47 to 63											
<b>Power consumption</b> (W max.)	150	1 200	200	500	6 000	1 000	1 200	2 000	5 000	8 000	14 000	
Cooling	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air	water
Working temperature (°C)	0 to 35											
Storage temperature (°C)	-10 to 50											
RF input connector (Front)	N fem											
RF output connector (Rear)	7/16 fem	7/16 fem	7/16 fem	7/16 fem	7/16 fem	7/16 fem	7/16 fem	7/16 fem	EIA flange	EIA flange	EIA flange	EIA flange
RF output sample ports (Rear)	N fem											
Pulse input connector (Rear)	N fem											
Interface connector (Rear)	IEEE488 & Ethernet											
Primary power connectors (Rear)	CEI320	CEI320	CEI320	CEI320	CEI320	CEI320	CEI320	CEI320	CEI320	CEI320	DS3	DS3
Number of unities (U)	3	4	4	8	12	16	20	26	2 x 30	2 X 46	3 x 46	
Size (WxHxD) (cm)	50.3x13x58	50.3x18x58	50.3x18x58	50.3x35x58	50.3x53x58	50.3x71x72	50.3x89x72	50.3x115x90	100x133x90	100x205x90	100x205x90	
Weight (Kg)	16	150	25	50	150	100	280	200	500	800	1200	