



ESU210BP50

20 ~ 1000MHz, 50W

- ▶ Portable Type Shelf
- ▶ High Power and Broad Band Performance
- ▶ High Efficiency

Functional Description

The S1049 is capable of amplifying signals up to 50 W across its entire operating bandwidth of 20 to 1000 MHz. It is possible to use 50 dB power gain with ± 1.0 dB gain flatness over the full frequency range, supporting a wide variety of high power test applications including EMI, reliability testing, RF stress testing, and more. The amplifier operates on a self-contained 220V AC power supply. Extensive safety features include over-temperature protection and the ability to handle open/short loads up, VSWR 3:1.

Electrical Performance

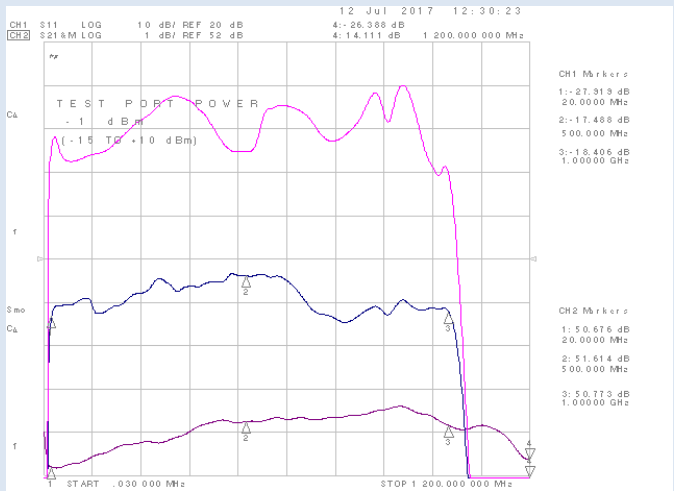
PARAMETER	SPECIFICATIONS			
	Min.	Typ.	Max.	Unit
Frequency Range	20	-	1000	MHz
Gain	-	50	-	dB
Power Gain Flatness	-	± 1.0	-	dB
Power @ CW	50	70	-	Watt
Input / Output - VSWR	-	-	2:1	-
Power Supply	AC 220V			V
Size	300 * 385 * 130			mm

Applications

- ▶ Automated Production Test
- ▶ R&D Bench Test
- ▶ RF component Test
- ▶ RF Burn-In
- ▶ Antenna Power Aging
- ▶ And more!!

Performance Plots

► Network Analyzer (E4438C), @ 25°C, 50Ω System



❖ Top Curve

- Small Signal Gain @ $P_{IN} = -20\text{dBm}$

❖ Middle Curve

- Power Gain @ P_{SAT} , $P_{IN} = -1\text{dBm}$
 - Reference: 52dB, 1dB/div.

❖ Bottom Curve

- Input Return Loss
 - Reference: 20dB, 10dB/div.

Front/Rear View



Front View

❖ Front component

- RF_{IN} / RF_{OUT}
- DC Power Switch
- RF on/off Switch
- Front handle



Rear View

❖ Rear component

- 220V AC Socket
- Rear handle

Electrical specifications @ +220VAC, 25°C, 50Ω System

Parameter	Symbol	Specifications	Unit
Operating Frequency	BW	20-1000MHz	MHz
Output Power CW @ P _{SAT}	P _{SAT}	50W Min.	Watt
Output Power @ 1dB Gain Compression	P _{1dB}	30W Min.	Watt
Power Gain @ 1dB Gain Compression	G _{1dB}	46dB Typ.	dB
Input Power for rated output power	P _{IN}	0dBm Typ.	dB
Small Signal Gain Flatness	ΔG	±2.0dB Max.	dB
Input Return Loss	S ₁₁	-10dB Max.	dB
Noise Figure	NF	10dB Typ.	dB
Third Order Intercept Point 2-tone IMD @ 37dBm/Tone, Δ = 100KHz	IP3	+53dBm Min.	dBm
Harmonics @ P _{OUT} = 30W	H	-20dBc Max	dBc
Spurious Signal	Spur	-60dBc Max.	dBc
Operating Voltage(single phase)	V _{AC}	100V Min, 240V Max.	Volt
Power Consumption @ P _{OUT} =50W CW	P _D	700W Max.	Watt