

Solid State Matched Band High Power Amplifier

6009 - MBS6C6KUT
3100 - 3500MHz / 1000Watts Pulse

PRELIMINARY INFORMATION

The model MBS6C6KUT (SKU 6009) is suitable for high power S-Band pulse applications. This rack mount amplifier utilizes pulse power devices that provide high gain and excellent Pulse output power performance. Long-term reliability and high efficiency are achieved by employing advanced broadband matching networks and combining techniques, high quality PFC power supply, EMI/RFI filters, machined housing, and all qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.



Shown with option package 09

- Solid-state Class AB linear pulse design
- Instantaneous broadband
- Suitable for Pulse applications
- Built-in control, monitoring & protection circuits
- 50 Ohm Input/Output impedance
- High reliability and ruggedness
- Isolator output protection

ELECTRICAL SPECIFICATIONS @ 220VAC, 25°C, 50Ω System

Characteristics	Rating	Min	Typ	Max	Units
Frequency Response	BW	3100		3500	MHz
Power Output @ Pulse conditions Duty Cycle = 10% Pulse Width = 100uSec	P _{PULSE}	1000			Watt
Pulse Power Variation (relative to mid pulse power)	P _{PPV}			±0.5	dB
Input Power for Rated Output	P _{IN}		0		dBm
Power Gain @ 1000W Pulse	G _P	60			dB
Output power flatness	ΔG	0		3	dB
Gain Adjustment Range	VVA	10	20		dB
Input/Output VSWR @ 50Ω	S11/S22			2:1	-
Noise Figure @ maximum gain	NF		10		dB
Harmonics	H		-20		dBc
Spurious Signals	Spur		-70	-60	dBc
Supply Voltage, Single Phase (50/60Hz)	VAC	180	220	260	Volt
Power Consumption @ 1000W peak (8% Duty)	P _D			900	Watt

MECHANICAL SPECIFICATIONS

Dimensions W x H x D (R3U)	19 x 5.25 x 22	Inch
Weight	50	lb.
RF Input Connector	SMA Female (Front)	
RF Output Connector	Type-N Female (Front)	
AMP OFF control connector	Dsub-9 pins (Rear)	
Cooling	Built in forced-air system	

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	T _c	0		+50	°C
Non-operating Temperature	T _{stg}	-40		+85	°C
Relative Humidity w/o condensation	RH	95			%
Altitude	Alt	10,000	30,000		Feet

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PROTECTIONS

Input Overdrive	+10dBm	Max
Load VSWR @ nominal peak power	∞ : 1 any angle & magnitude	Nom
Thermal Overload	85°C shutdown	Max
Duty Cycle Control	10%	Max

SELECTED AVAILABLE OPTIONS (Refer to www.empowerrf.com for complete options listing)

Option	Number	Description
LCD	062	Touchscreen Digital Display, including Fwd/Rev Power indication (dB or Watt scale), On/Off, Standby mode, Fault indication, Rear panel HPIB IEEE-488.2 or Full Duplex RS232 remote interface. Note: Output Power is lowered by 0.5 - 0.75dB with this option.
FCN	051	Front Panel Type-N female
RCN	052	Rear Panel Type-N female
FSP	053	Front Panel SMA-F Sample Port
RSP	054	Rear Panel SMA-F Sample Port

Available Options Packages: 07, 08, 09, 10

I/O CONNECTOR

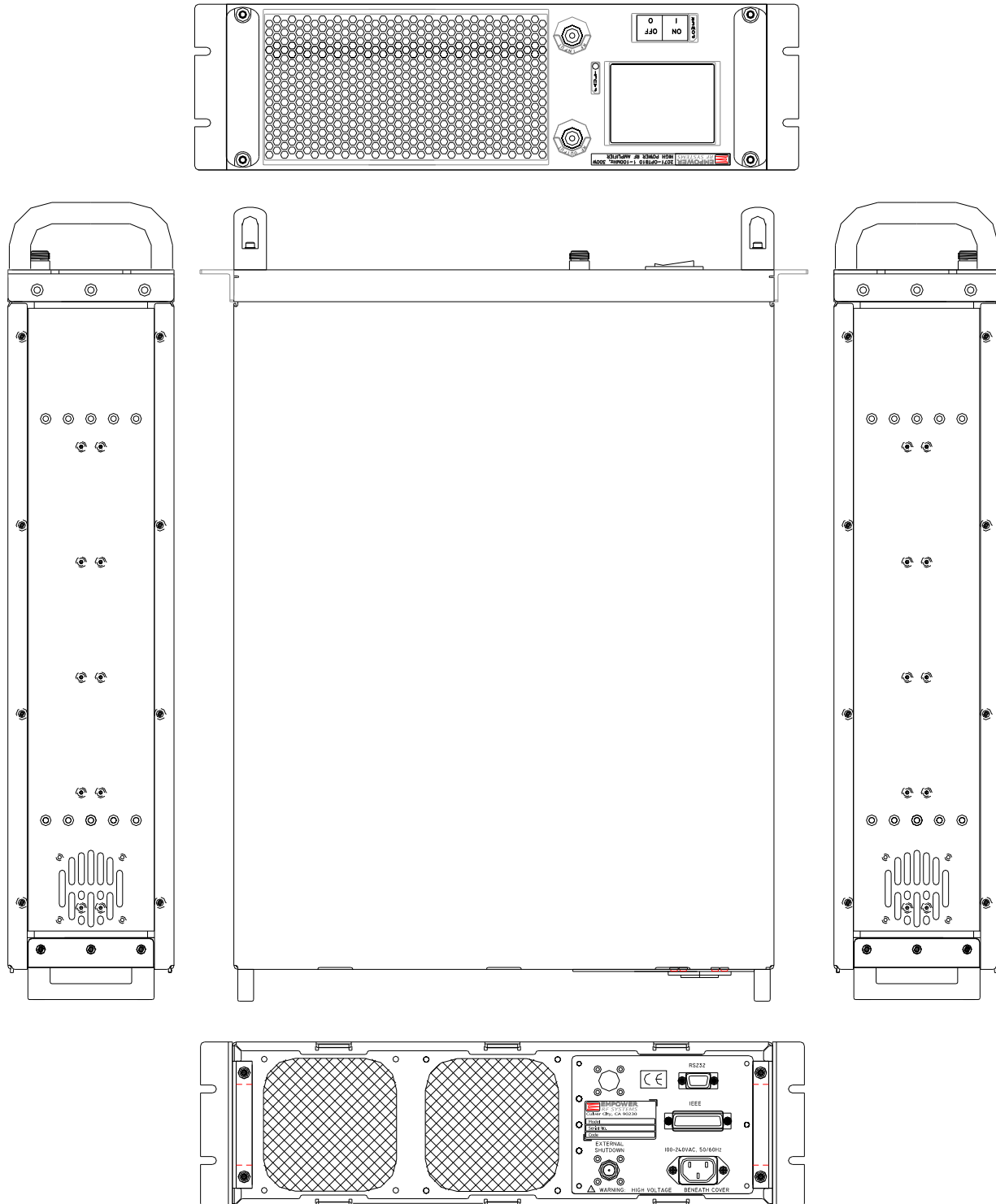
Pin No.	DESCRIPTION	SPECIFICATION
1	Power Supply VDD1 (TP)	32.0 ± 4.0VDC
2	Duty Cycle Fault Indicator	Normally High
3	Internal 5VDC (TP)	5.0 ±0.2VDC
4	VVA (TP)	5.6V ±0.2VDC
5	Shutdown	Disable = TTL "High" ♦ Enable = TTL Low*
6	Power Supply 12VDC (TP)	12.0 ±0.5VDC
7	Power Supply VDD2 (TP)	32.0 ± 4.0VDC
8	GND	Ground
9	GND	Ground

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OUTLINE DRAWING - SHOWN WITH OPTION PACKAGE 09

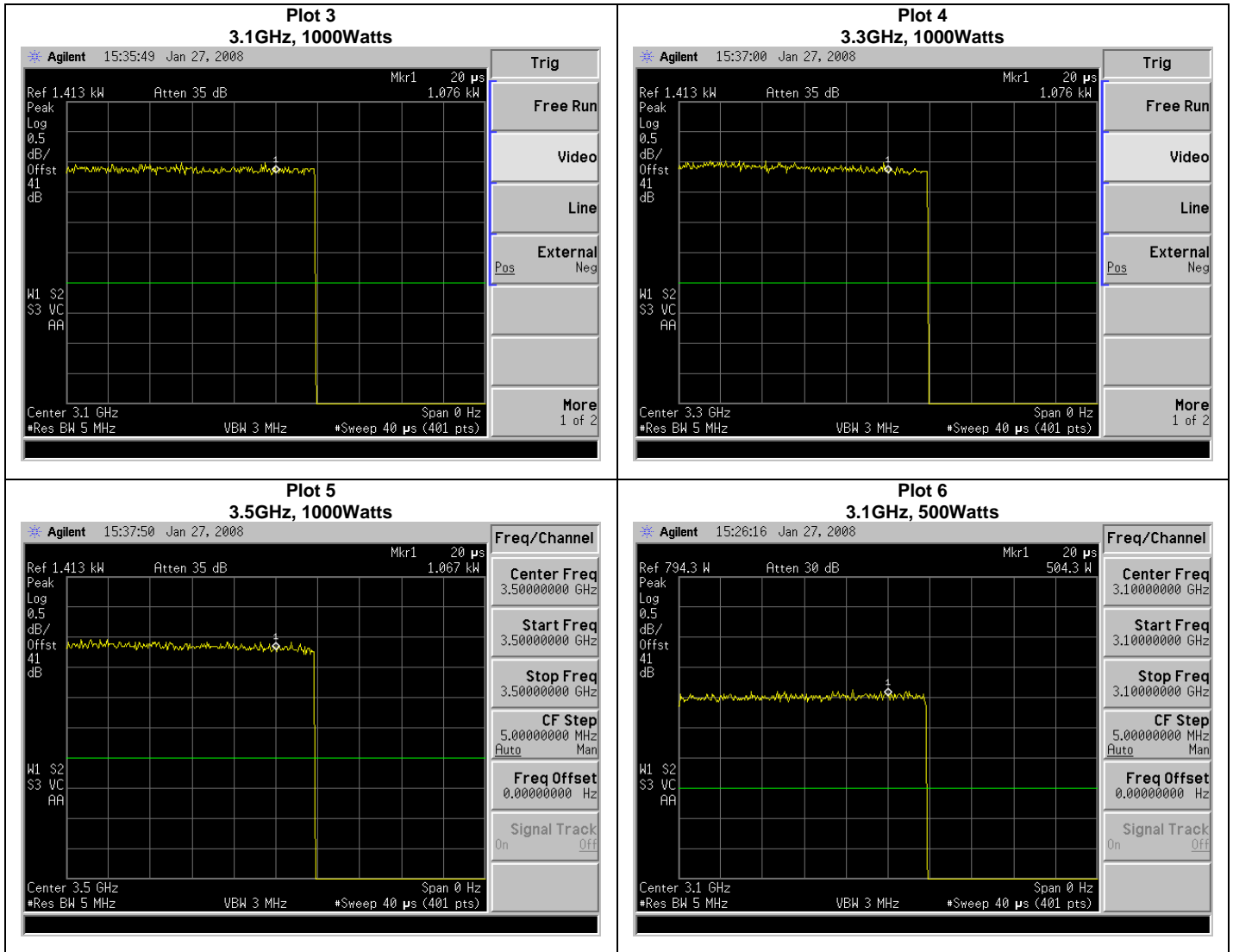


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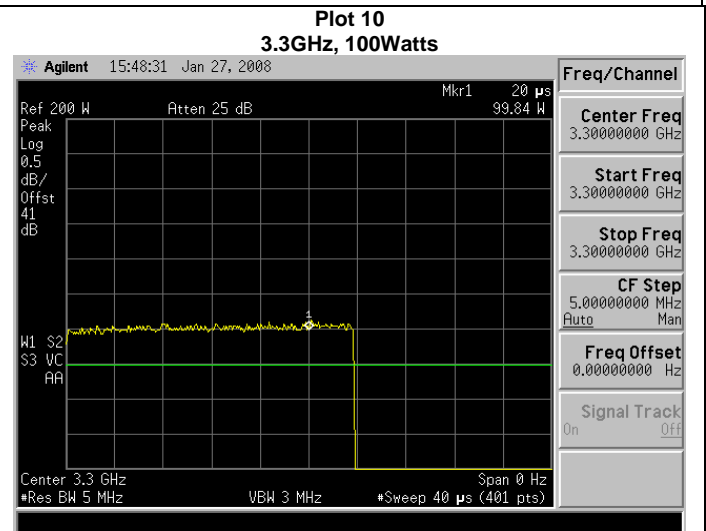
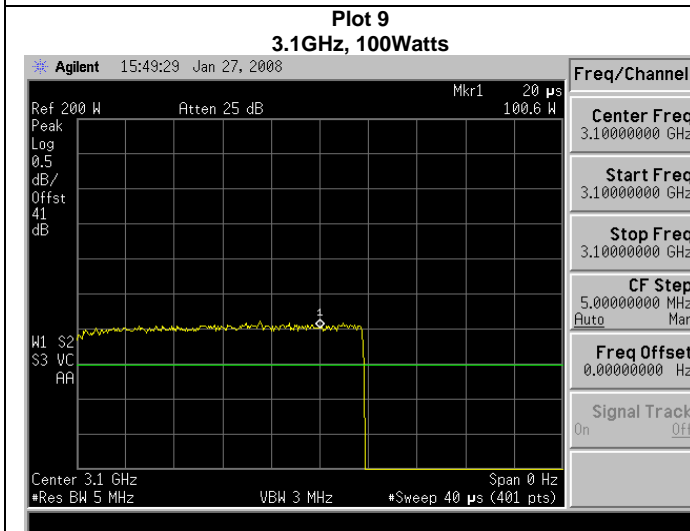
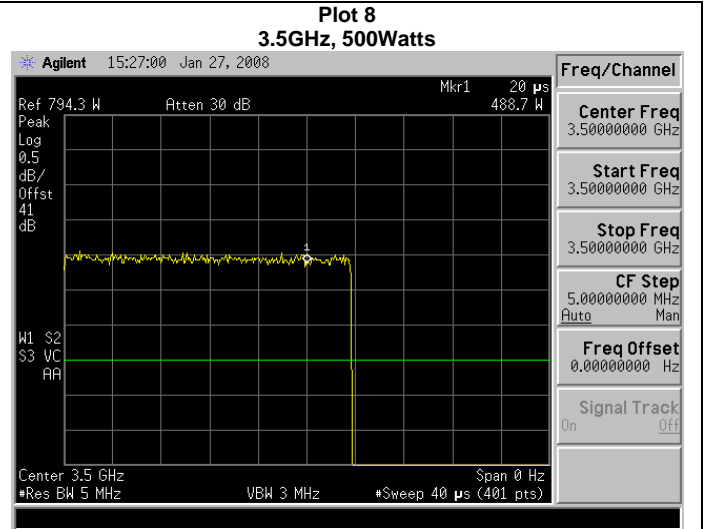
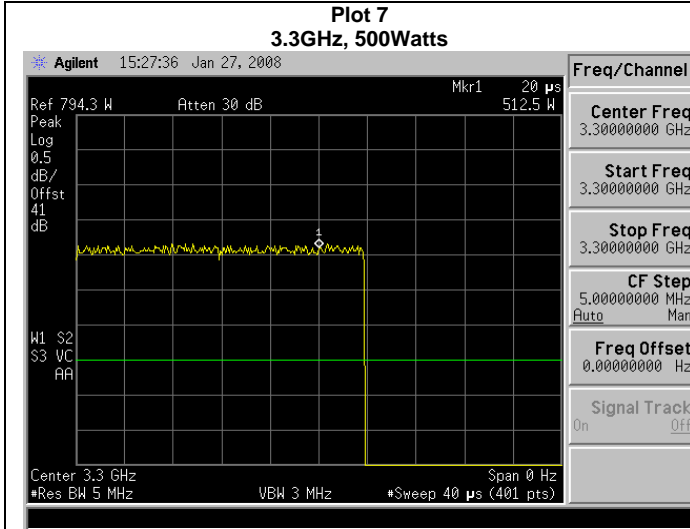
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TYPICAL PERFORMANCE PLOTS



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