



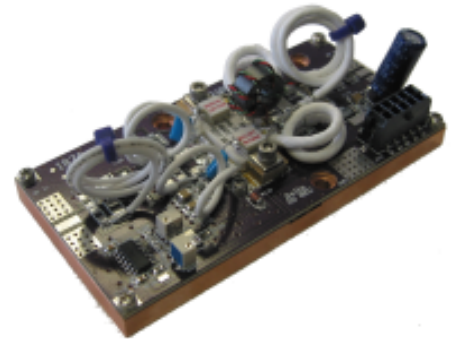
PA40-VHF-H-18

High Power RF Amplifiers and Accessories

VHF Band III TV Ultra Linear PA Driver - Digital and Analog

The **PA40-VHF-H-18** is a true class A amplifier designed specifically for analog and digital television applications where a high power driver or IPA is required to drive a tube or high power solid state PA stages. Utilizing gold-metallized MOSFET technology, this PA offers unmatched performance and reliability. Capable of delivering in excess of 150W ultra linear VHF / Band III, this amplifier delivers optimum performance from microwatts to just under 50 Watts Pk Sync Power, or 25W average power for digital applications before any pre-correction is applied.

- No RF assembly or circuit tuning!
- 150W Pk Sync Analog / 25W CW Digital!
- 17.5dB typical gain at Channel 13!
- Modular Construction for ease of Integration!



Specifications:

$V_{sup}=+24V_{dc}$, $I_{dg}=8.0A$, 160-240MHz

Parameter	Min	Typ	Max	Units
Fundamental Pout, CW, P1dB	125	150		Watts
Analog Power Out, Pk Sync <small>Ultra Linear, Without Correction, Suitable for Driver</small>		40		Watts
Digital Power Out, CW <small>Ultra Linear, Suitable for Driver</small>		50		Watts
Power Gain	17	18		dB
IMD, Full Field Red, NTSC-NA <small>For input signal -62dB min IMD, at 40W Pk Sync</small>	-54			dBc
Drain Current		8	12	A
Input VSWR		1.2:1	1.5:1	
Gain Compression <small>50W CW, 225MHz</small>		0.1	0.2	dB
Differential Gain <small>40W Pk Sync, Ch 7, No Correction, pk-pk</small>			3	%
Sync Compression <small>40W Pk Sync, Ch 7, No correction, pk-pk</small>			5	%
F2,F3 Second Harmonic 50W		-46	-40	dBc
Baseplate Operating Temp	-20		+70	°C
Physical Dimensions	2.0" x 4.0" x 1.0" / 10cm x 10cm x 3cm			

Absolute Maximum Ratings:

Parameter	Value	Units
Maximum Operating Voltage	+28.0	V DC
Maximum Bias Current <small>Factory set to 8.0A.</small>	8.0	A
Maximum Drain Current	12.0	A
Load Mismatch Survival <small>At all phase angles with the base plate held at 40C and Id current limited to 12A, 2 seconds maximum</small>	∞:1	
Storage Temperature	-65 to +150	°C
Maximum Operating Baseplate Temperature	+70	°C

Features Include:

- Temperature Compensated Bias
- Amplifier Disable
- Current Sense
- Connectorized Power and I/O

web <http://www.drft.com> • email : sales@drft.com • 1.775.DELTA RF • FAX 1.775.DELTA FX

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The specifications contained herein are subject to change without notice. Delta RF Technology, Inc. assumes no liability for the use of this information.

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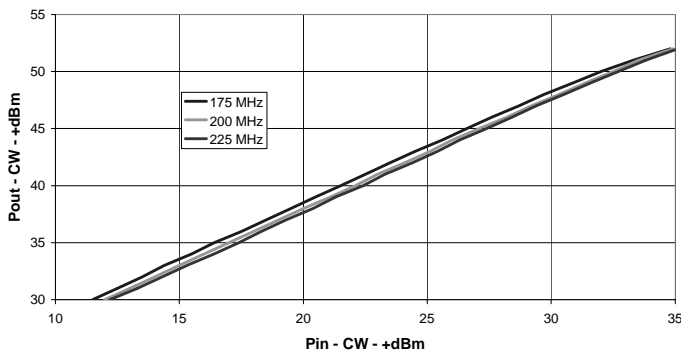
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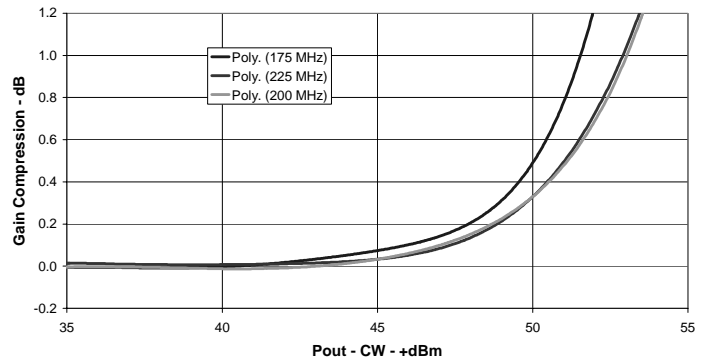
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Single Tone CW Measurements

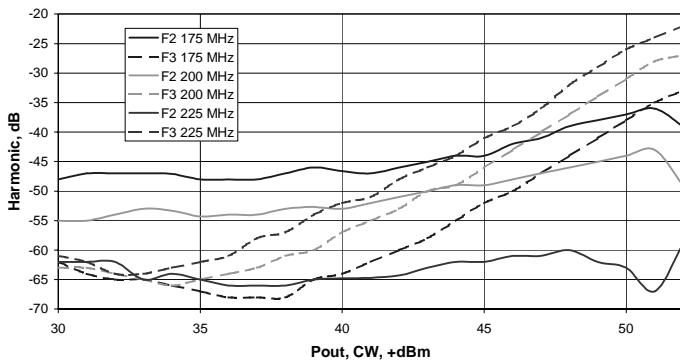
Pout vs. Pin



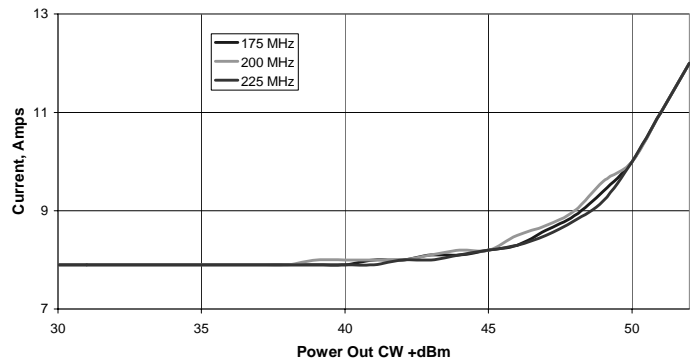
Gain Compression



Second, Third Harmonics



Current vs. Power Out



All tests performed using HP 8640B Signal Generator, Single Tone, LA0005-10 Laboratory Amplifier. Tests performed with amplifier terminated into 50 ohm load.



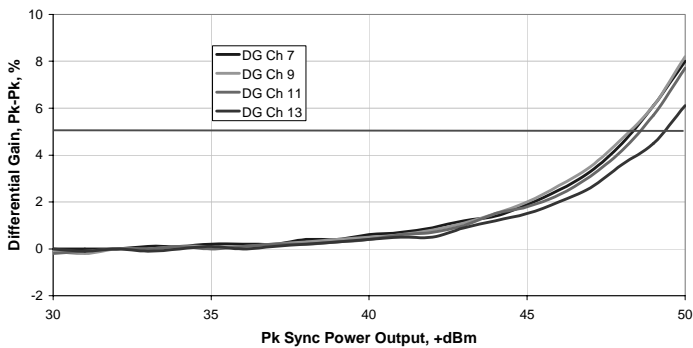
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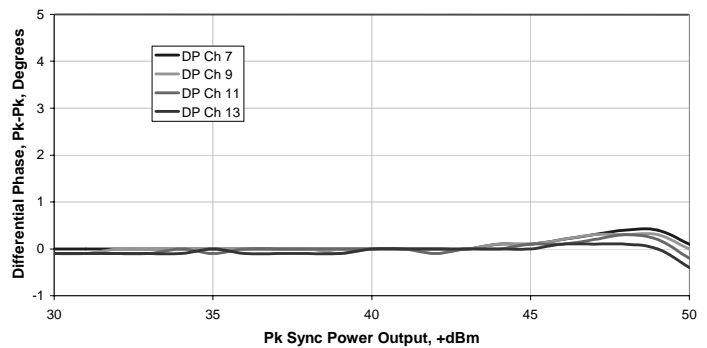
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Video Measurements

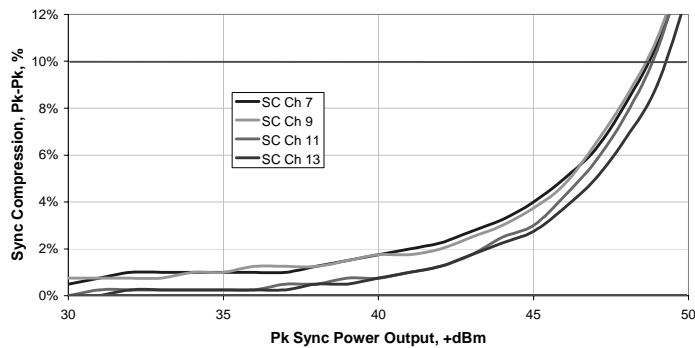
Differential Gain



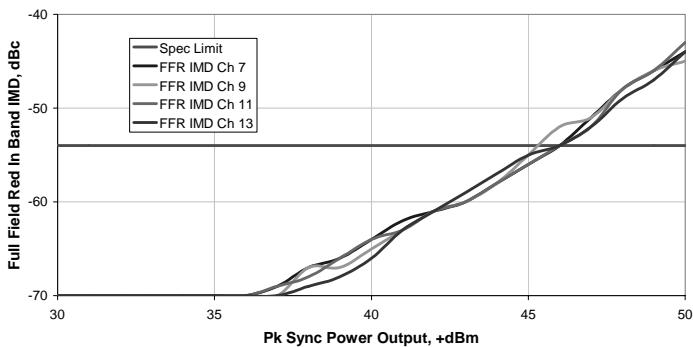
Differential Phase



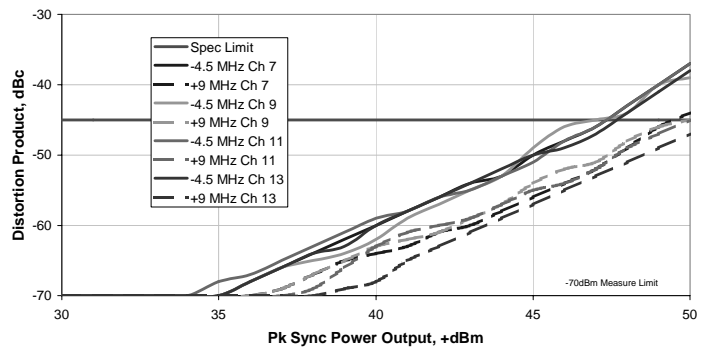
Sync Compression



NTSC Full Field Red In Band Inter Modulation Distortion



-4.5MHz +9MHz Distortion Product



All tests performed using LA0005-10 Laboratory Amplifier, NTSC Modulator at +10dBm output, NTSC Video Generator. No pre-correction