

DMP 102

APPLICATIONS:

- coaxial cable line driver
- baseband and video communications
- pulse amplifiers

FEATURES:

- drives up to 12V_{pp} into 50 ohm loads
- very low distortion, low offset drift, and low overshoot
- extremely linear phase and wide dynamic range

electrical characteristics (Note 1)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Gain (inverting)	DC to 100MHz, P _o ≤ 24dBm		15		dB
-3dB Bandwidth	18dBm ≤ P _o ≤ 24dBm P _o < 18dBm	200	220 275		MHz MHz
Input and Output Impedance	see Note 2		50		ohms
Group Delay	DC to 200MHz		2.3 ± .08		ns
-1dB Gain Compression	at 100MHz		26		dBm
Rise and Fall Times	10% to 90%, 10V step		1.6	1.75	ns
Overshoot Aberrations	duration not to exceed 10 ns		2%	5%	
Settling Time	to .4%, 10V step		150		ns
Slew Rate			5000		V/us
Third Order Intermodulation Intercept (two tone)	at 20MHz at 100MHz		43 36		dBm dBm
Second/Third Order Harmonic Distortion	P _o = 24dBm, R _L = 50, at 10KHz at 20MHz at 100MHz V _o = 20V _{pp} , R _L = ∞, 10KHz		64/64 52/40 39/29 66/66		- dBc - dBc - dBc - dBc
Equivalent Input Noise	10Hz to 300 MHz Bandwidth		46		uV
Noise Figure			15.5		dB
Dynamic Range	at 100MHz		85		dB
DC Offset Voltage	Input Output		<8 <30		mV mV
Output Voltage Temperature Coefficient (Referenced to Input)	Over 0° C to 70° C		15		uV/° C
Supply Current			140		mA

Note 1: All parameters measured at T_A = 25°C with R_L = R_S = 50Ω, using ±15V supplies. Min/max parameters guaranteed over the operating temperature range.

absolute maximum ratings

Voltage at input: ±2V peak

Storage Temperature: -25° C to +85° C

Operating Temperature: 0° C to 70° C

Supply Voltage: ±16V

