

ASMA-201

Thin Film Surface Mount Amplifier 1 to 500 MHz

Description

The **ASMA-201** is a 50 Ohm silicon transistor amplifier featuring internal biasing and feedback networks.

The **ASMA-201** will find application in RF/Microwave systems up to 500 MHz requiring superior broadband, high linearity and excellent stability.

Features

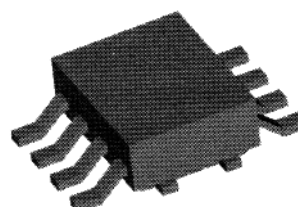
- Stable 50 Ohm Gain Block
- Cascadable Broadband Performance
- Single Positive Supply Operation
- Replacement for **RF Products SMA-201**

Maximum Ratings $T_c = 25^\circ\text{C}$

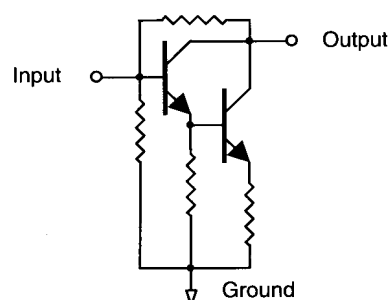
SYMBOL	RATING	UNITS
I_D	325	mA
P_{IN}	+27	dBm
T_J	+175	$^\circ\text{C}$
T_{SOLDER}	+260 $^\circ\text{C}$ for 10 Seconds	$^\circ\text{C}$
T_{STG}	-65 to +150	$^\circ\text{C}$

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Package Style SOIC 8



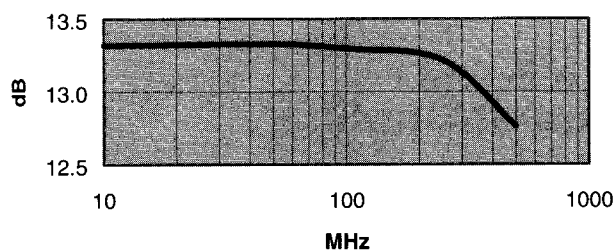
Schematic



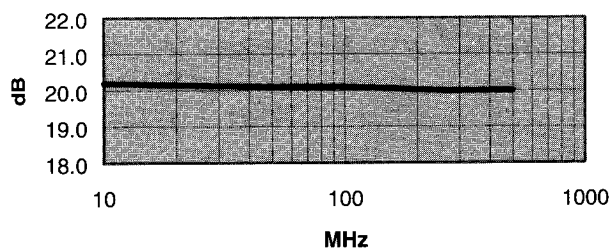
ELECTRICAL SPECIFICATIONS $I_D = 250\text{ mA}$

SYMBOL	Characteristics	$T_c = +25^\circ\text{C}$ TYPICAL	$T_c = 0\text{ to }+50^\circ\text{C}$		UNITS
			MINIMUM	MAXIMUM	
BW	Frequency Range	---	1	500	MHz
G_P	Small Signal Power Gain	12.8	12.0		dB
ΔG_P	Gain Flatness	± 0.3		± 0.6	dB
NF	Noise Figure (100 MHz)	6.0		7.5	dB
P_{1dB}	Power Output at 1dB Compression	+28	+26		dBm
VSWR	Input Output	1.6:1 2.0:1		2.0:1 2.5:1	---
REV. ISOL.	Reverse Isolation	20	---	---	dB
I_{P2}	Two Tone 2 nd Order Intercept Point	+53	---	---	dBm
I_{P3}	Two Tone 3 rd Order Intercept Point	+41	---	---	dBm
H_{P2}	Single Tone 2 nd Harmonic Intercept Point	+59	---	---	dBm
V_D	Device Voltage	12.5	11.5	13.5	V

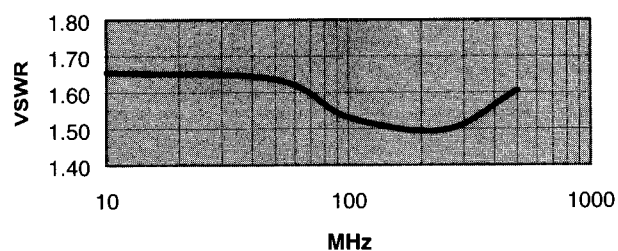
G_p vs Frequency



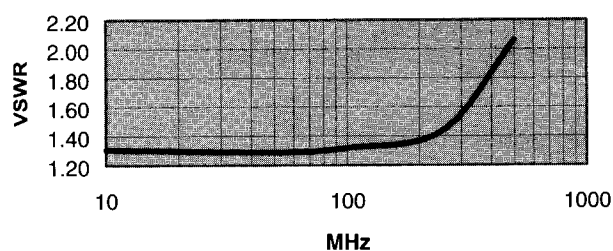
Reverse Isolation vs Frequency



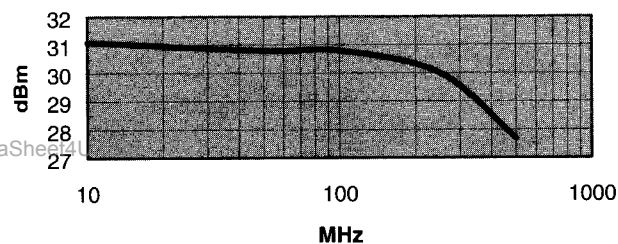
Input VSWR vs Frequency



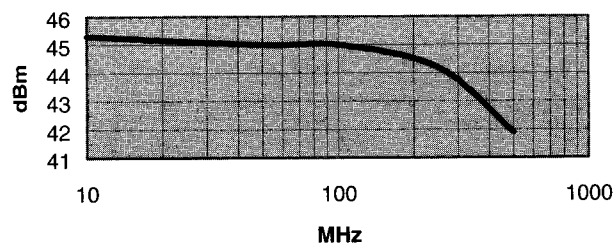
Output VSWR vs Frequency



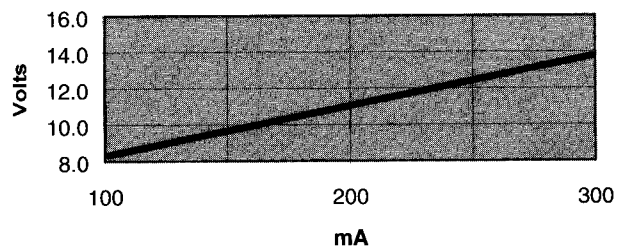
P_{1dB} vs Frequency



IP₃ vs Frequency



Device Voltage vs. Current



Test Configuration

