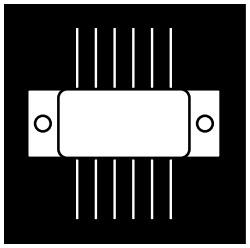
DUAL HIGH POWER, HIGH CURRENT OPERATIONAL AMPLIFIER MODULE



12 Pin, Dual Uncommitted Power Operational Amplifiers And Power Sense Resistors

FEATURES

- Dual Op Amps - Uncommitted
- Dual Sense Resistors - Uncommitted
- Output Current To 10A Peak
- Power Supply To ±40V
- FET Input
- Hermetic Package - Isolated Devices
- Available Screened To MIL-STD-883

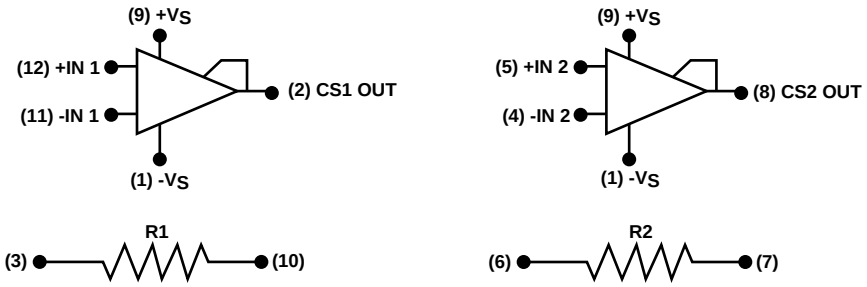
DESCRIPTION

The OMA8201SF is a high performance hybrid integrated circuit which contains two (2) uncommitted power amplifiers and two (2) high power sense resistors. The device is ideally suited for high density and high reliability systems. The sense resistor can be customized for specific applications, however R_{min} 20 m .

ABSOLUTE MAXIMUM RATINGS (Per Device) @ 25°C

Supply Voltage $+V_S$ to $-V_S$	80V
Output Current, Continuous	5A
Power Dissipation, Internal	125W
Resistor Dissipation, Maximum	5W
Operating Temperature Range	- 55°C to + 125°C
Storage Temperature Range	- 55°C to + 150°C
Maximum Junction Temperature	150°C
Lead Temperature (10 Sec. Soldering)	300°C

SCHEMATIC



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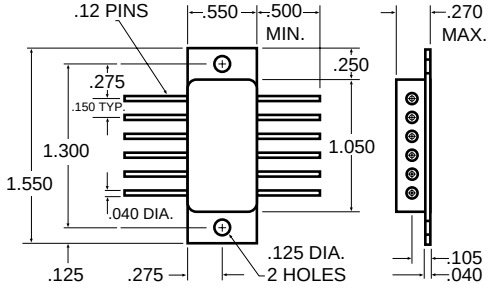
OMA8201SF

ELECTRICAL CHARACTERISTICS (T_C = 25°C; V_S = ±34 V_{DC} unless otherwise noted.)

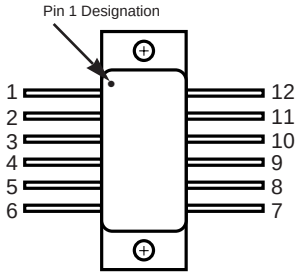
Parameter	Conditions	Min.	Typ.	Max.	Units
Input Offset Voltage					
V_{OS}			±.01	±2	mV
vs Temperature	-25°C to +125°C		±15	±30	µV/°C
vs Temperature	-55°C to -25°C		±20	±40	µV/°C
vs Supply Voltage	V_S = ±10V to ± V_{MAX}		±2.5	±10	µV/V
vs Power			±20	±60	µV/W
Input Bias Current					
I_B	Specified Temperature Range		20	50	nA
Input Offset Current					
I_{OS}	Specified Temperature Range		±5	±20	nA
Input Characteristics					
Common-Mode Voltage Range	-55°C to +85°C	±(œV$_S$œ- 6)	±(œV$_S$œ- 3)		V
	+85°C to +125°C	±(œV$_S$œ- 6.5)	±(œV$_S$œ- 3.2)		V
Common-Mode Rejection	V_{CM} = ±(œV$_S$œ- 6V)		113		dB
	V_{CM} = ±22V	95			dB
Input Capacitance*			5		pF
Input Capacitance, DC*			1		T
Gain Characteristics					
Open Loop Gain at 10Hz	R_L = 10k	90	97		dB
Gain Bandwidth Product*			1.6		MHz
Output					
Voltage Swing	I_O = 5A, Continuous	±(œV$_S$œ- 5.5)	±(œV$_S$œ- 4.5)		V
	I_C = 25A, T_C = 125°C	±(œV$_S$œ- 4)	±(œV$_S$œ- 3.6)		V
	T_C = -55°C	±(œV$_S$œ- 6)	±(œV$_S$œ- 5.5)		V
Current Peak		9	10		A
AC Performance					
Slew Rate		6	10		V/µS
Power Bandwidth*	R_L = 8 , V_O = 20V_{rms}		55		kHz
Setting Time to 0.1%*	2V Step		2		µS
Capacitive Load*	Specified Temperature Range, G =1	3.3			nF
	Specified Temperature Range, G >10			SOA	
Phase Margin*	Specified Temperature Range, R_L = 8		40		Degrees
Power Supply					
Power Supply Voltage, ±V_S		±10	±35	±40	V
Current Quiescent	Specified Temperature Range		50	70	mA
Thermal Resistance					
q_{JC} (Junction-to-Case)	AC Output, f < 60Hz		1.25	1.5	°C/W
	DC Output		1.4	1.9	°C/W
q_{JA} (Junction-to-Ambient)	No Heat Sink		30		°C/W

Notes: *Guaranteed - not tested 100%.

MECHANICAL OUTLINE



PIN CONNECTION



Pin 1: -V_S
Pin 2: CS1 OUT
Pin 3: R1
Pin 4: -IN 2
Pin 5: +IN 2
Pin 6: R2
Pin 7: R2
Pin 8: CS2 OUT
Pin 9: +V_S
Pin 10: R1
Pin 11: -IN 1
Pin 12: +IN 1

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