42115	OPERATIONAL AMPLIFIER DSCC DWG #5962-9082801 **Replacement for OPA511 and PA 10**	***Mii*** **HYBRID MICROELECTRONICS PRODUCTS DIVISION**

Features:	**Applications:**
• Wide Supply Voltage Range (±10 to ±50 Volts) • High Output Current (5A Peak) • Small Size (TO-3, 8 Pins) • Low Cost	• Programmable Power Supplies • Motor, Valve & Actuator Controls • Audio Amplifiers • Magnetic Deflection Circuits

DESCRIPTION

The 42115 (DSCC Drawing #5962-9082801) is a high power, high voltage, high current, power operational amplifier which also is an alternate to the popular OPA511 and PA10. The high current output stage delivers 5A and has externally adjustable current limiting capability. This Hybrid IC is housed in an 8 pin, hermetic TO-3 and is designed for driving inductive, capacitive and resistive loads.

ABSOLUTE MAXIMUM RATINGS

Power Supply Voltage (V_{CC}) ..... ±50VDC
Differential Input Voltage ..... $\pm V_{CC}$ -3V
Common Mode Input Voltage ..... $\pm V_{CC}$
Operating Temperature Range (case) ..... -55°C to +125°C
Storage Temperature Range ..... -65°C to +150°C
Output Current ..... 5A Peak
Power Dissipation at T_C = 25°C 67W
Lead Temperature (Soldering < 10 sec)..... +300°C

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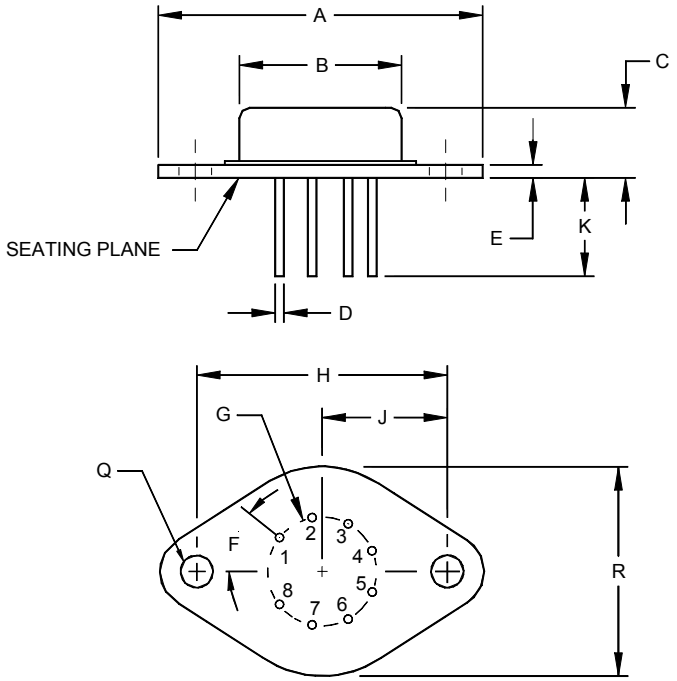
OPERATIONAL AMPLIFIER DESC DWG #5962-9082801

Mechanical Configuration



Note: Leads in true position with 0.010" (0.25mm) R at MMC at seating plane
Pin Numbers shown for reference only. Numbers may not be marked on package.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.510	1.550	38.35	39.37
B	0.760	0.780	19.30	19.81
C		0.290		7.37
D	0.97	1.07	0.038	0.042
E	0.080	0.100	2.03	2.54
F	40º BASIC		40º BASIC	
G	.500 BASIC		12.7 BASIC	
H	1.186 BASIC		30.12 BASIC	
J	.593 BASIC		15.06 BASIC	
K	0.460	0.500	11.68	12.70
Q	0.151	0.161	3.84	4.09
R	0.990	1.010	25.15	25.65

ELECTRICAL CONNECTIONS	
Pin 1	Output
Pin 2	CL^+
Pin 3	$+V_C$
Pin 4	+IN
Pin 5	-IN
Pin 6	$-V_S$
Pin 7	F.O.
Pin 8	CL-

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ELECTRICAL CHARACTERISTICS

T_C = 25° C, V_{CC} = ±36 VDC
unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	T_C = 25°C T_C = -55°C to +125°C		±2 ±10	±6 ±65	mV uV/ºC
Input Offset Voltage vs Supply	V_{IO} (V_{CC})			±30	±200	µV/V
Input Offset Voltage vs Power	V_{IO} (P)			±20		µV/W
Input Bias Current	I_{B+}, I_{B-}	T_C = 25°C T_C = -55°C to +125°C		 50	30 400	nA pA/°C
Input Bias Current vs Supply	I_B (V_{CC})			10		pA/V
Input Offset Current	I_{I0}	T_C = 25°C T_C = -55°C to +125°C		12 50	30	nA pA/°C
Input Impendance	R_{IN}			200		MΩ
Gain Bandwidth Product @ 1 MHz	G_B	T_C = 25°C R_L = 15Ω		6		MHz *
Power Bandwidth	P_B	T_C = 25°C R_L = 8Ω	15	23		KHz
Phase Margin	I_m	-55°C to +125°C R_L = 15Ω		20		Degree *
Common Mode Rejection Ratio	CMRR	V_{ICM} = ±9V V_{CC} = ±15V, R_L = 500 -55°C to +125°C	96			DB
Output Voltage/ Voltage Swing	V_0	I_0 = 10A, V_{CC} = ±16V R_L = 1Ω	±10			V
Output Voltage Swing	V_0 V_0	T_C = 25°C, I_0 =5A I_0 = 80mA -55º to +125ºC	±V_{CC} –8 ±V_{CC} -5	4.0		V V
Open Loop Gain	A_V	R_L = 1Kf = 10Hz		110		dB
Slew Rate @ 20% of V_0	SR	R_L = 100Ω, R_{CL} = 0 V_{IN} = 40 V_{P-P} square wave f = 1kHz, V_0 = 40 V_{P-P}	2.5	5.0		V/µS
Power Supply	V_{CC}	-55°C to +125°C	±10	±40	±50	V
Quiescent Current	I_S	V_{IN} = 0.G = 100	8	15	30	mA