TECHNICAL DATA
Preliminary Data Rev.-

POWER OPERATIONAL AMPLIFIER

Applications:

- **Motor Drivers • Servo Amplifiers • Magnetic Deflection • Audio**

Features:

- **10A Peak Current**
- **Supply Range ±10V to ±40V**
- **Programmable Current Limit**
- **Replacement for OPA541, OMA541, MSK541**
- **Wide Range of Available Packages**
- **Hermetic and Non-Hermetic Versions Available**
- **MIL-STD-883 Screening Available**

Maximum Ratings:

Supply Voltage, V_s	±40V
Continuous Output Current	5A
Power Dissipation, Internal	125W
Case Operating Temperature Range	-55^0C to 125^0C
Storage Temperature Range	-55^0C to 150^0C
Junction Temperature	150^0C
Differential-Mode Input Voltage	$\pm V_s$
Common-Mode Input Voltage	$\pm V_s$

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@ 1A, Pulse, T_J = 25 °C	0.56	V
	V_{F2}	@ 1A, Pulse, T_J = 125 °C	0.51	V
Max. Reverse Current	I_{R1}	@V_R = 45V, Pulse, T_J = 25 °C	100	μA
	I_{R2}	@V_R = 45V, Pulse, T_J = 125 °C	4.5	mA
Max. Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz, V_{SIG} = 50mV (p-p)	53	pF

TECHNICAL DATA

Characteristics	Symbol	Condition[1]	Grp. A	Min.	Max.	Units
Input offset voltage	VIO	T_A= +25°C	1	-1	+1	mV
Input offset voltage drift	$\Delta V_{IO}/\Delta T$	T_A= -55°C and +125°C	2,3	-30	+30	µV/°C
Input bias current	$\pm I_{IB}$		1	-50	+50	pA
			2,3	-50	+50	nA
Input offset current	I_{OS}		1	-30	+30	pA
			2,3	-20	+20	nA
Power supply rejection ratio	+PSRR	-V_{CC}= -34V dc, +V_{CC}= +10 V to +40 V dc	1	-10	+10	µV/V
			2,3	-20	+20	
	-PSRR	+V_{CC}= +34V dc, -V_{CC}= -10 V to -40 V dc	1	-10	+10	µV/V
			2,3	-20	+20	
Common mode rejection ratio	CMRR	V_{CM}= ±22 V dc, f = dc	1	95		dB
			2,3	90		
Supply currents	$\pm I_{CC}$	V_{CM}= 0 V, no load condition	1,2,3	-30	+30	mA
Output voltage peak	V_{OP}	I_O= 5 A peak, R_L= 5.6Ω, 10 kHz sine wave, T_A= +25°C	4	±28.0		V
		R_L= 10Ω, 10 kHz sine wave, T_A= -55°C and +125°C	5,6	±30		
Output current peak	I_{OP}	R_L= 5.6Ω, V_{OUT}= ±28 V, T_A= +25°C 2/	4	±5		A
		R_L= 10Ω, V_{OUT}= ±30 V T_A= -55°C and +125°C 2/ 3/	5,6	±3		
Voltage gain	A_{VS}	R_L= 10 kΩ	4	95		dB
			5,6	86		
Slew rate	±SR	R_L= 10.0Ω, T_A= +25°C	7	±6		V/µs

[1] -55°C ≤ TA ≤ +125°C, ±VCC = ±34 V dc unless otherwise specified

[2] Internal current limit circuitry is controlled by a single external resistor, RCL. To calculate the value of the current limit resistor, use RCL= (0.809/ILIM) - 0.057, where ILIMis equal to the desired output current (IOP).

[3] Test can be performed using RL= 10 kΩwith a minimum limit of ±3 mA.

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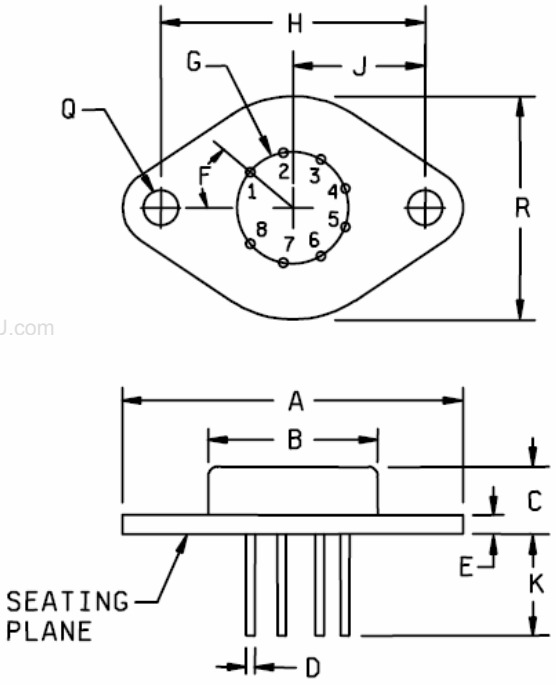

Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A	1.510	1.550	38.35	39.37
B	.745	.770	18.92	19.56
C	.260	.340	6.60	8.64
D	.038	.042	0.97	1.07
E	.080	.105	2.03	2.67
F	40° BSC		40° BSC	
G	.500 BSC		12.7 BSC	
H	1.186 BSC		30.12 BSC	
J	.593 BSC		15.06 BSC	
K	.400	.500	10.16	12.70
Q	.151	.161	3.84	4.09
R	.980	1.020	24.89	25.91

OTHER PACKAGES ARE AVAILABLE. PLEASE CONSULT FACTORY.