



**FLH0101AK/883
FLH0101K/883**
Product Data Sheet

5 Amp Linear Wide Band Power
Operational Amplifier In A Hermetic
8-Lead TO-3 Package



5 AMP LINEAR WIDE BAND POWER OPERATIONAL AMPLIFIER IN A HERMETIC 8-LEAD TO-3 PACKAGE

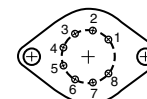
DESCRIPTION:

Film Microelectronics has developed this Power Operational Amplifier for use in servo amplifiers, power supplies and actuators. Small size and high reliability make these devices suitable for use in industrial, aerospace, and military applications.

FEATURES:

- 5 A Peak Output Current
- 10V/ μ s Slew Rate
- Very Fast Settling Time - 2 μ s to 0.01%
- Low Input Offset Voltage
- Ultra Low Crossover Distortion
- Thermally Efficient TO-3 Package
- Available as DSCC SMD 8508901/02YA
- Additional Screening Available

PIN CONNECTION Top View



Pin Connection

- Pin 1: $I_{SC}+$
Pin 2: $V+$
Pin 3: Feedback
Pin 4: N/C
Pin 5: -Input
Pin 6: +Input
Pin 7: $V-$
Pin 8: $I_{SC}-$
Case: Output

ABSOLUTE MAXIMUM RATINGS @ $T_C = 25^\circ\text{C}$, unless otherwise stated

Parameter	Rating	Units
V_S Supply Voltage	± 22	V
V_{CM} Input Voltage Range	± 20 , but $< \pm V_S$	V
V_{IN} Differential Input Voltage	± 40 , but $< \pm V_S$	V
$I_{O(PK)}$ Peak Output Current (50 ms pulse)	5	A
θ_{JC} Thermal Resistance Junction To Case	2	$^\circ\text{C/W}$
P_D Power Dissipation (derate linearly @ 2°C/W to 0 @ 150°C)	62	W
T_J Operating Junction Temperature	-55 to +150	$^\circ\text{C}$
T_{STG} Storage Temperature	-65 to +150	$^\circ\text{C}$
Lead Temperature (10 sec)	300	$^\circ\text{C}$

RECOMMENDED OPERATING CONDITIONS

Parameter	Range	Units
T_A Ambient Operating Temperature Range	-55 to +125	$^\circ\text{C}$

e-mail: www.fmisales@satc.com
Website: www.filmmicroelectronics.com



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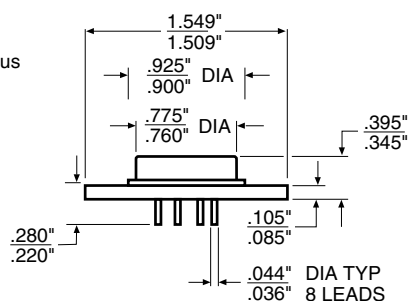
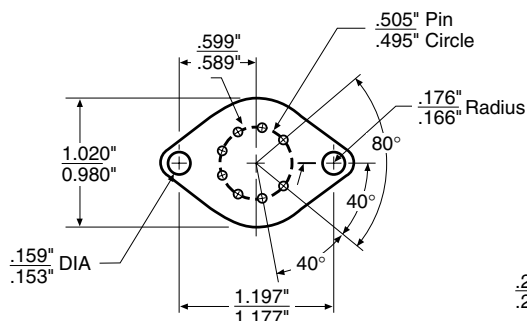
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Electrical Characteristics @ $T_A = 25^\circ\text{C}$, unless otherwise stated

Parameter	Min.	Max.	Units	Test Conditions
V_{IO} Input Offset Voltage (Device Type FLH0101AK)		3 7	mV	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
V_{IO} Input Offset Voltage (Device Type FLH0101K)		10 15	mV	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
I_{IB} Input Bias Current (Device Type FLH0101AK)		300 300	pA nA	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
I_{IB} Input Bias Current (Device Type FLH0101K)		1000 1000	pA nA	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
I_{IO} Input Offset Current (Device Type FLH0101AK)		75 75	pA nA	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
I_{IO} Input Offset Current (Device Type FLH0101K)		250 250	pA nA	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$ to $+125^\circ\text{C}$
A_{VOL} Large Signal Voltage Gain	50	-	V/mV	$V_O = \pm 10\text{V}$, $R_L = 10\Omega$
V_O Output Voltage Swing	± 11.7 ± 11	-	V	$R_{SC} = 0\Omega$, $A_V = 1$, $R_L = 100\Omega$ $R_{SC} = 0\Omega$, $A_V = 1$, $R_L = 10\Omega$
CMRR Common Mode Rejection Ratio	85		dB	$V_{IN} = \pm 10\text{V}$
PSRR Power Supply Rejection Ratio	85 80 80		dB	$\pm 5\text{V} \leq V_S \leq \pm 15\text{V}$ $+5\text{V} \leq V_S(+) \leq +15\text{V}$, $V_S(-) = -15\text{V}$ $-5\text{V} \geq V_S(-) \geq -15\text{V}$, $V_S(+) = +15\text{V}$
I_S Supply Current	-	35	mA	
SR Slew Rate (Device Type FLH0101AK)	7.5	-	V/ μs	$R_L = 10\Omega$, $A_V = 1$
GBW Gain-Product Bandwidth (Device Type FLH0101AK)	4		MHz	$R_L = \infty$, $A_V = 1$

MECHANICAL OUTLINE



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