Monolithic Linear IC



Applications

The LA6518M is a 2-output power operational amplifier developed for use in consumer and industrial equipment.

Features and Functions

- High output current ($I_0 max = 0.5 A$)
- High gain
- Includes current limiter
- Wide operating voltage range (± 2 to ± 18 V)
- Single power supply operation possible (4 to 36 V)
- Thermal shutdown function built in

Package Dimensions

unit : mm

3097-MFP16FS



Specifications

Maximum Ratings at Ta = 25 °C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} /V _{EE}		±18	V
Differential input voltage	V _{ID}		30	V
Common-mode input voltage	V _{IN}		±15	V
Allowable power dissipation	Pd max		0.7	W
Operating temperature	Topr		-20 to +75	۰C
Storage temperature	Tstg		-55 to +150	°C

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Operating Conditions at Ta = 25 $^{\circ}C$

Parameter	Symbol	Conditions	Ratings	Unit	
Recommended supply voltage	V _{CC} /V _{EE}		±2 to ±16	V	

Electrical Characteristics at Ta = 25 °C, $V_{CC}/V_{EE} = \pm 15 \text{ V}$

Parameter	Symbol	Conditions	min	typ	max	Unit
No-load current drain	ICC			8	20	mA
Input offset voltage	V _{IO}	$R_{S} \leq 10 \ k\Omega$		2	7	mV
Input offset current	l _{IO}			10	100	nA
Input bias current	Ι _Β			100	300	nA
Common-mode input voltage range	VICM		-14		+13	V
Common-mode signal rejection ratio	CMR		65	80		dB
Maximum output voltage	Vo	$R_L = 33 \Omega$	±11	±12		V
Voltage gain	V _{GO}			85		dB
Slew rate	SR	$G_V = 0, R_L = 33 \Omega, R = 10 \Omega, L = 0.1 \mu F$		0.15		V/µs
Supply voltage rejection ratio	SVR			30	300	μV/V
Limit current (built-in type)	I _{SC}			0.5		A

• Thermal shutdown function built in.

Block Diagram and Pin Assignment



2. V₀

Test Circuit







3. CMRR, V_{ICM}

4. IB (-)





$$\mathrm{IB}(-) = \frac{|\Delta \mathrm{V}_0 2 - \mathrm{V}_0 1|}{50 \mathrm{k} \Omega \times 100}$$

5. IB(+)



$$IB(+) = \frac{|\Delta V_0 3 - V_0 1|}{50k\Omega \times 100}$$

6. I_{IO}



$$I_{IO} = \frac{|V_O 4 - V_O 1|}{50 k\Omega \times 100}$$



9. VG₀



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