DS04-11104-3E

LINEAR IC

DUAL OPERATIONAL AMPLIFIER

MB47358

DUAL OPERATIONAL AMPLIFIER OPERATES A SINGLE OR DUAL POWER SUPPLY

The Fujitsu MB47358 is designed for a general purpose dual operational amplifier with internal frequency compensation and to operate from a single power supply or dual power supplies. The MB47358 is suitable for audio with the fast slew rate and with the reduction of cross-over distortion. The MB47358 fits an application of microcomputer because of its wide output voltage range. The MB47358 is compatible with LM358.

■ FEATURES

- Not required compensation
- Wide power supply voltage range Single power supply: 3 V to 30 V Dual power supplies: ±1.5 V to ±15 V
- Wide output voltage range
- · No cross-over distortion
- Fast slew rate –2 V/μs typ.

■ PACKAGES



PLASTIC PACKAGE SIP-9P-M01



PLASTIC PACKAGE DIP-8P-M01



PLASTIC PACKAGE FPT-8P-M01

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields. However, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit.

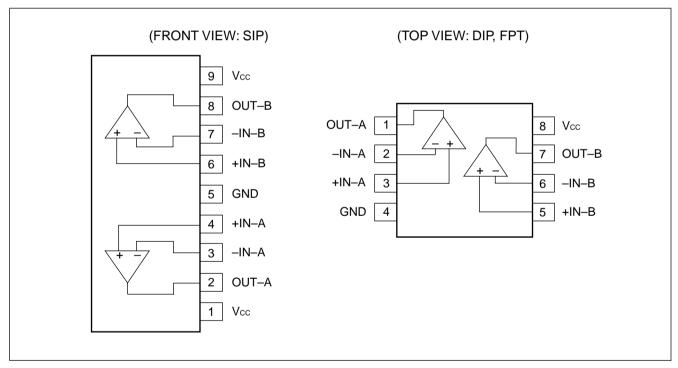
■ ABSOLUTE MAXIMUM RATINGS (see NOTE)

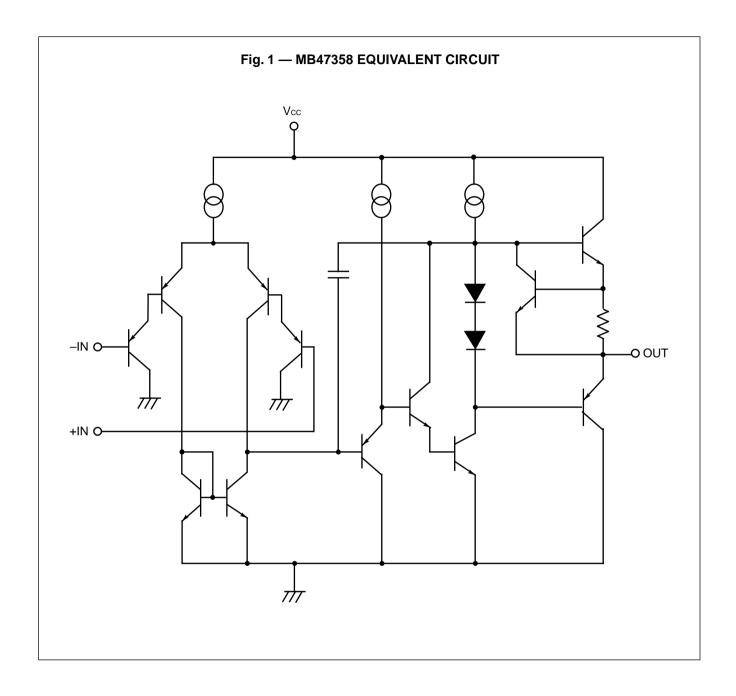
 $(T_A = 25^{\circ}C)$

Rating	Symbol	Value	Unit
Power Supply Voltage	Vcc	36	V
Differential Input Voltage	VID	36	V
Common-mode Input Voltage	Vicm	-0.3 to +36	V
Power Dissipation	P□	350 (T _A ≤ 55°C)	mW
Operating Temperature	TA	-20 to +75	°C
Storage Temperature	Тѕтс	-55 to +125	°C

NOTE: Permanent device damage may occur if the above Absolute Maximum Ratings are exceeded. Functional operation should be restricted to the conditions as detailed in the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

■ PIN ASSIGNMENT





■ RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Value	Unit	
Power Supply Voltage	Vcc	3 to 30	V	
	VCC	±1.5 to ±15	V	
Operating Temperature	TA	-20 to +75	°C	

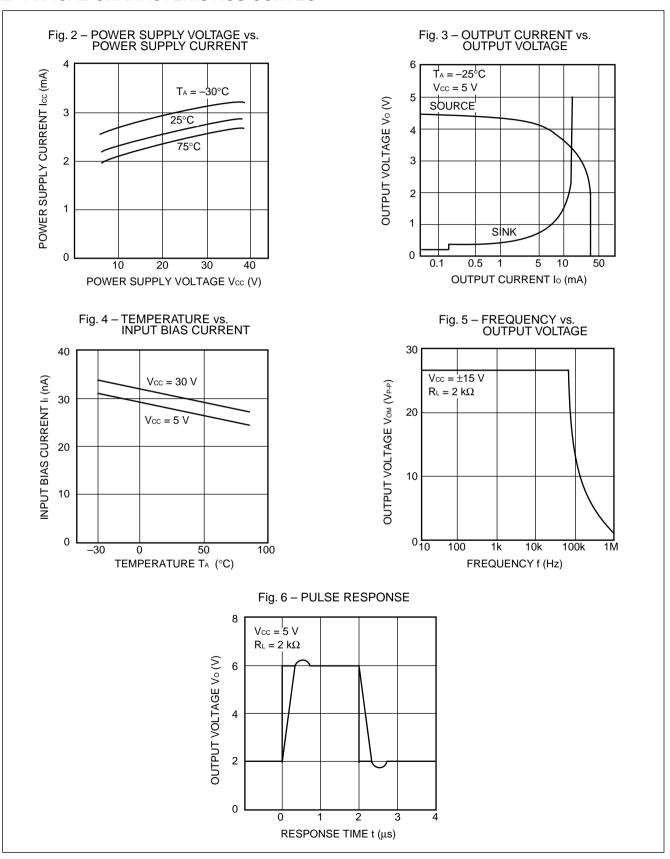
■ RECOMMENDED OPERATING CONDITIONS

 $(T_A = 25^{\circ}C, V_{CC} = +5 \text{ V})$

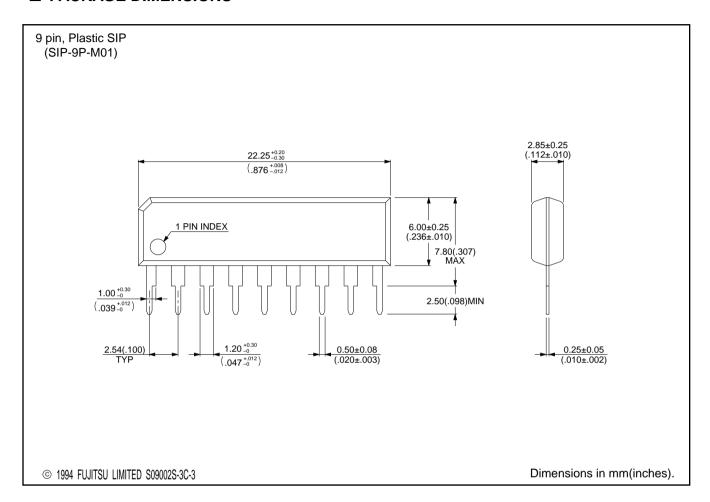
Dovomotov	Symbol	Condition	Value			
Parameter		Condition	Min.	Тур.	Max.	Unit
Input Offset Voltage	Vio	_	_	2	7	mV
Input Offset Current	lio	_	_	5	50	nA
Input Bias Current	lı*	_	_	45	250	nA
Power Supply Current	Icc	R _L = ∞, V _{CC} = 5 V	_	2.0	3.0	mA
Common-mode Input Voltage	VICM	_	0	_	Vcc – 1.5	V
Voltage Gain	Av	$R_L \ge K \ 2 \ k\Omega$	25	100	_	V/mV
Common-mode Rejection Ratio	CMRR	_	65	85	_	dB
Power Supply Voltage Rejection Ratio	SVRR	_	65	100	_	dB
Output Voltage	Vон	$R_L = 2 \text{ k}\Omega$	3.5	4.1	_	V
		R _L = 10 kΩ	4.0	4.2	0	V
	VoL	Isink ≤ 60 μA	_	0.2	0.4	V
		Isink ≤ 2 mA	_	0.8	1.5	V
Maximum Output Voltage	Vом	$R_L \ge 10 \text{ k}\Omega$, $V_{CC} = \pm 15 \text{ V}$	±12	±14	_	V
		$R_L = 2 \text{ k}\Omega$, $V_{CC} = \pm 15 \text{ V}$	±10	_	_	V
Output Current	Isource	ISOURCE VIN+ = 1 V, VIN- = 0 V, VCC = 15 V		40	_	mA
	Isink	V _{IN+} = 0 V, V _{IN-} = 1 V, Vcc = 15 V	10	20	_	mA
		V _{IN+} = 0 V, V _{IN-} = 1 V, V _O = 0.4 V	60	150	_	μА
Channel Separation	CS	f = 1 kHz	_	120	_	dB
Slew Rate	SR	$R_L = 2 \text{ k}\Omega$	_	2	_	V/µs

Note: A direction of the input bias current flows from IC because first input transistor consists of PNP.

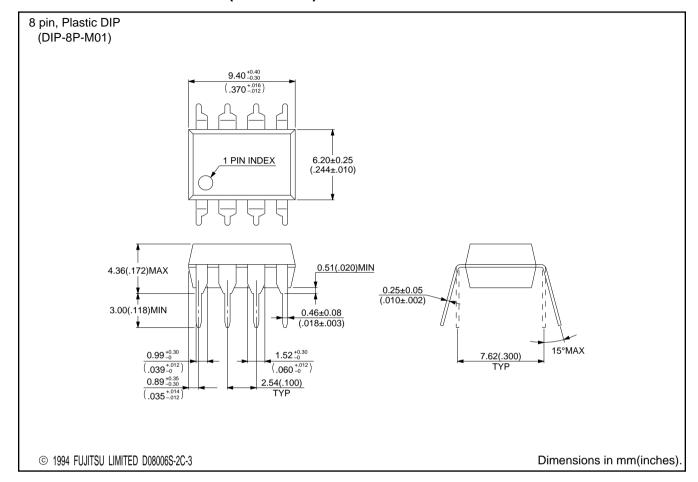
■ TYPICAL CHARACTERISTICS CURVES



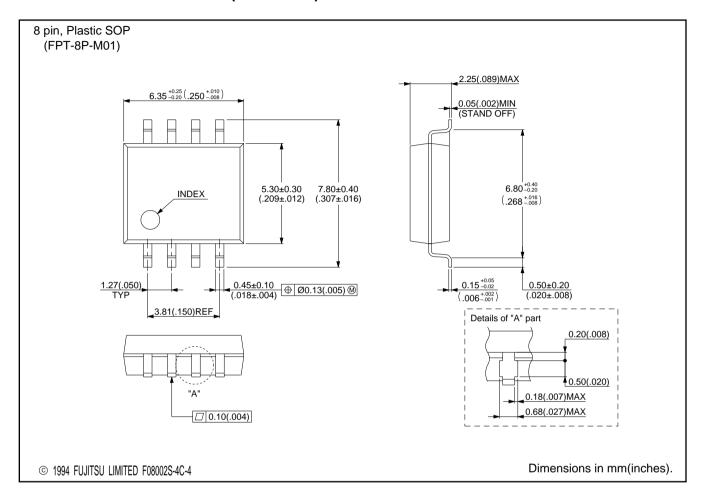
■ PACKAGE DIMENSIONS



■ PACKAGE DIMENSIONS (Continued)



■ PACKAGE DIMENSIONS (Continued)



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