SINGLE OPERATIONAL AMPLIFIER

DESCRIPTION

The UTC M2100 is a low supply voltage and low saturation output voltage (+-2.0V p-p at supply voltage +-2.5V) operational amplifier. It is applicable to handy type CD, radio cassette CD, and portable DAT, that are digital audio apparatus which require the 5V single supply operation and high output voltage.

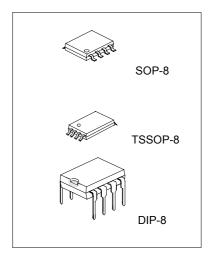
FEATURES

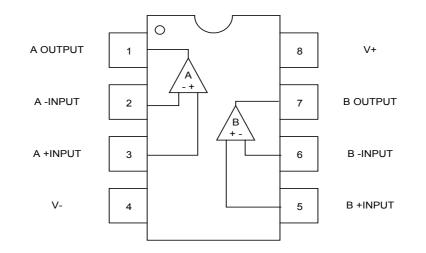
*Single Supply Operation *Operating Voltage (+-1.0V~+-3.5V) *Low Saturation Output Voltage *High Slew Rate (4V/ µs typ.)

*Package Outline

*Bipolar Technology

PIN CONFIGURATION

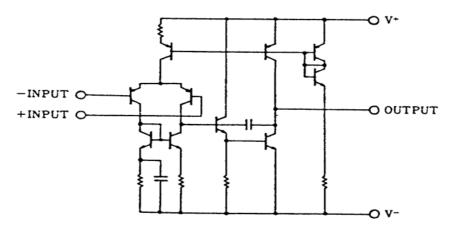




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QW-R105-011.B

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT			
Supply Voltage	V+/V-	+-3.5	V			
Differential Input Voltage	VID	+-7	V			
Power Dissipation	PD	500 (DIP8)	mW			
		300 (SOP8)				
		250 (TSSOP8)				
Operating Temperature Range	Topr	-20~+75	°C			
Storage Temperature Range	Tstg	-40~+125	С°			

ELECTRICAL CHARACTERISTICS (Ta=25°C)

(v =5v, ra=25°C, unless otherwise specified)									
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP.	MAX	UNIT			
Input Offset Voltage	Vio	Rs<=10kΩ		1	6	mV			
Input Bias Current	lів			100	300	nA			
Large Signal Voltage Gain	Av	RL>=10kΩ	60	80		dB			
Maximum Output Voltage Swing	Vom	RL>=2.5kΩ	+-2	+-2.2		V			
Input Common Mode Voltage Range	VICM		+-1.5			V			
Common Mode Rejection Ratio	CMR		60	74		dB			
Supply Voltage Rejection Ratio	SVR		60	80		dB			
Operating Current	lcc	VIN=0,RL=∞		3.5	5	mA			
Slew Rate	SR	Av=1,VIN=+-1V		4		V/µS			
Gain-Bandwidth product	GB	f=10kHz		12		MHz			

NOTE1: Applied circuit voltage gain is desired to be operated within the range of 3 dB to 30dB.

NOTE2: Special care being required for input common mode voltage range and the oscillation due to the capacitive load when operating on voltage follower.

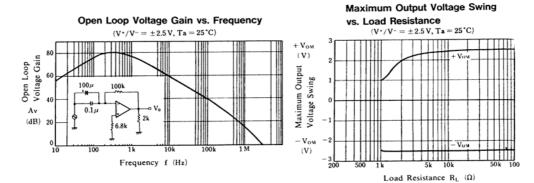
NOTE3: Special care being required for the oscillation, yet having the gain when the supply voltage is applied at more than 5V (single supply voltage 5V)

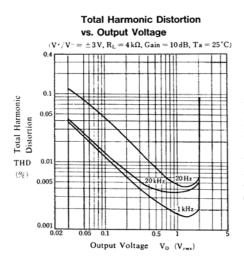
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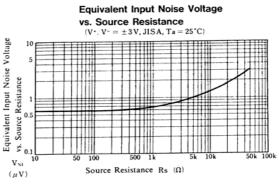
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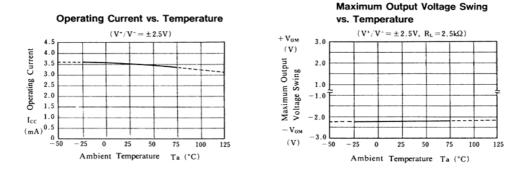
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TYPICAL CHARACTERISTICS



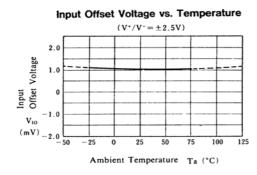


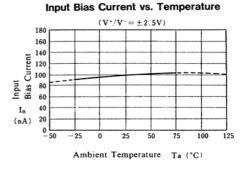


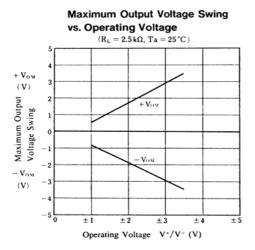


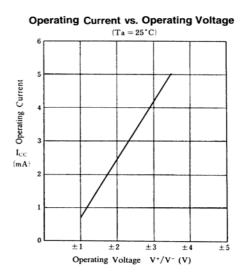
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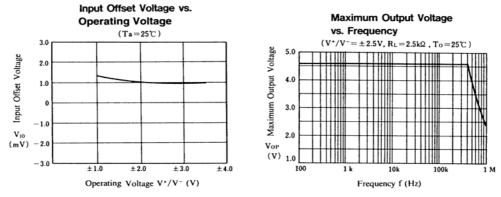
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