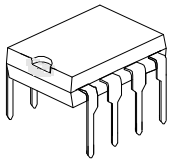
MC4556

LINEAR INTEGRATED CIRCUIT

DUAL OPERATIONAL AMPLIFIER



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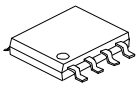


SOP - 8

■ DESCRIPTION

The UTC MC4556 integrated circuit is a high-gain, high output current dual operational amplifier capable of driving ±70mA into 150Ω loads (±10.5V output voltage), and operating low supply voltage (V+/V- = ±2V~).

The UTC MC4556 combines many of the features of the popular UTC MC4558 as well as having the capability of driving 150Ω loads. In addition, the wide band-width, low noise, high slew rate an low distortion of the UTC MC4556 make it ideal for many audio, telecommunications and instrumentation applications.

■ FEATURES

* Operating Voltage (±2V~±18V)
* High Output Current (I_{OUT}=70mA)
* Slew Rate (3V / μs typ.)
* Gain Band Width Product (8MHz typ.)
* Bipolar Technology

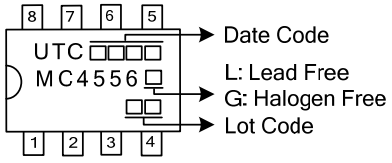
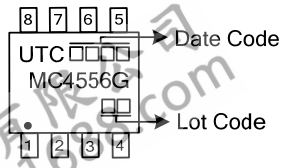
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
MC4556L-D08-T	MC4556G-D08-T	DIP-8	Tube
-	MC4556G-S08-R	SOP-8	Tape Reel

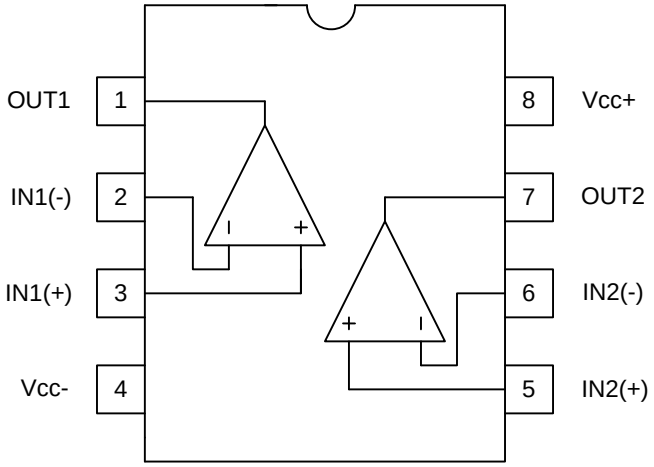
MC4556L-D08-T
(1)Packing Type
(2)Package Type
(3)Green Package

(1) T: Tube, R: Tape Reel
(2) D08: DIP-8, S08: SOP-8
(3) L: Lead Free, G: Halogen Free and Lead Free

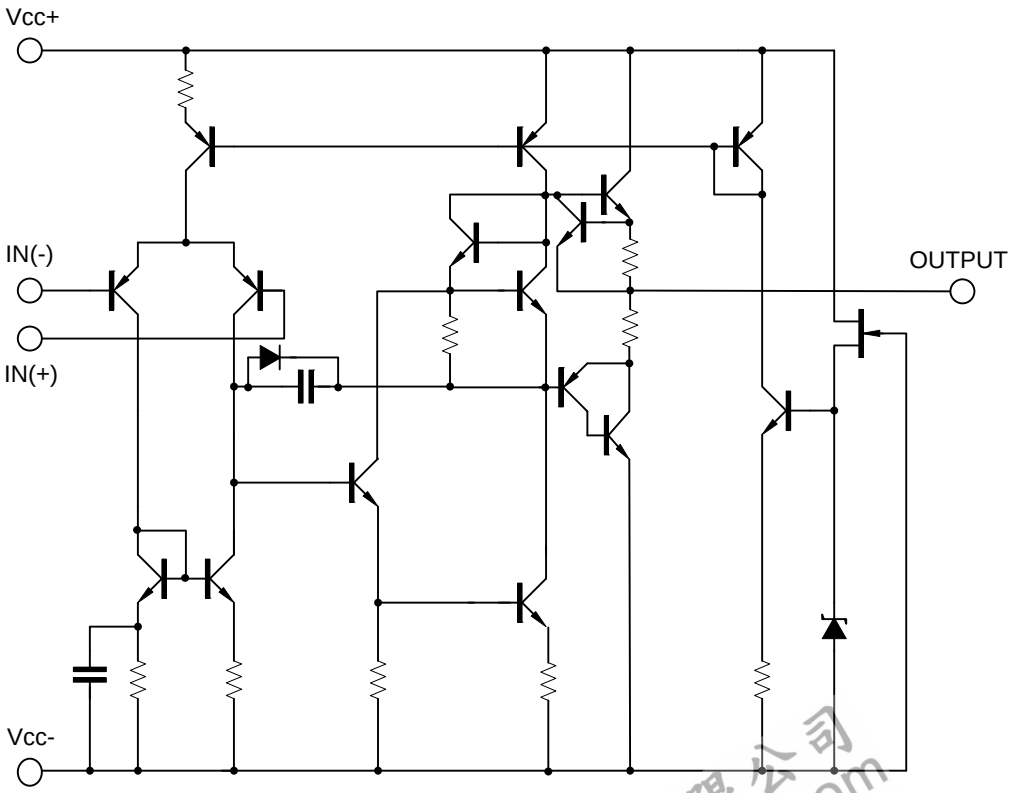
■ MARKING

DIP-8	SOP-8
	

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V+/V-	±18	V
Differential Input Voltage		$V_{I(DIFF)}$	±30	V
Input Voltage		V_{IN}	±15(Note 1)	V
Power Dissipation	DIP-8	P_D	700	mW
	SOP-8		300	
Operating Temperature		T_{OPR}	-20 ~ +75	°C
Storage Temperature		T_{STG}	-40 ~ +125	°C

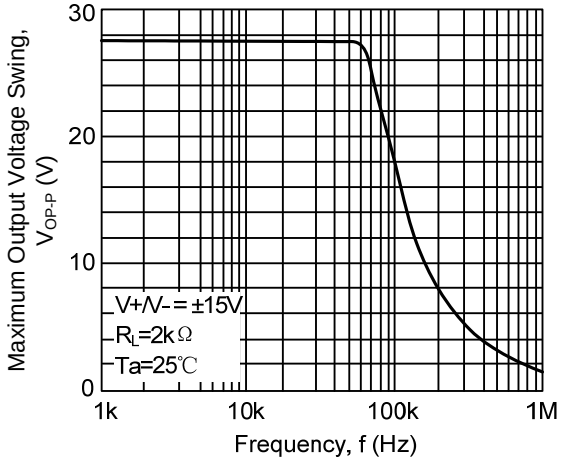
Note: 1. For supply voltage less than ±15V, the absolute maximum input voltage is equal to the supply voltage.
2. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C , V+/ V-=±15V)

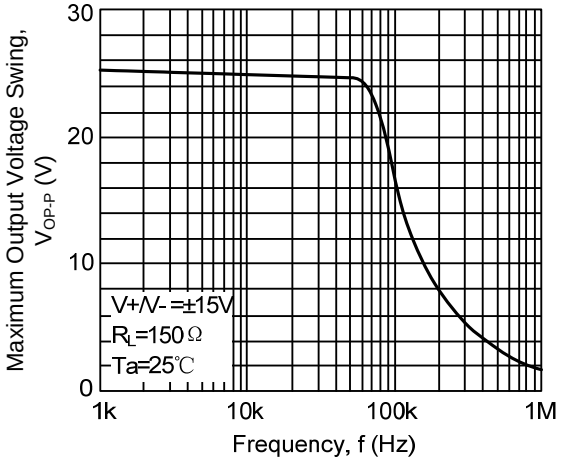
PARAMETER	SYMBOL	TEST CONDUCTION	MIN	TYP	MAX	UNIT
Input Offset Voltage	$V_{I(OFF)}$	Rs ≤ 10kΩ		0.5	6	mV
Input Offset Current	$I_{I(OFF)}$			5	60	nA
Input Bias Current	$I_{I(BIAS)}$			50	500	nA
Input Resistance	R_{IN}		0.3	5		MΩ
Large Signal Voltage Gain	Gv	R_L ≥ 2kΩ, V_{OUT} = ±10V	86	100		dB
Maximum Output Voltage 1	V_{OM1}	R_L ≥ 2kΩ	±12.0	±13.5		V
Maximum Output Voltage 2	V_{OM2}	R_L ≥ 150Ω	±10.5	±11.0		V
Input Common Mode Voltage Range	$V_{I(CM)}$		±13.5	±14.0		V
Common Mode Rejection Ratio	CMR	Rs ≤ 10kΩ	70	90		dB
Supply Voltage Rejection Ratio	SVR	Rs ≤10kΩ	76.5	90		dB
Operating Current	Icc			9	12	mA
Slew Rate	SR			3		V/μs
Unity Gain Bandwidth	GB_W			8		MHz

■ TYPICAL CHARACTERISTICS

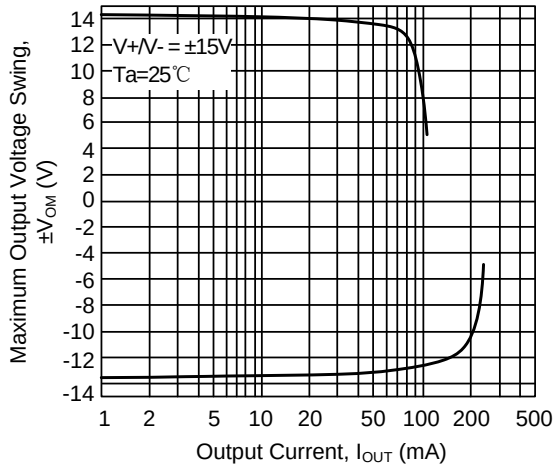
Maximum Output Voltage Swing vs. Frequency



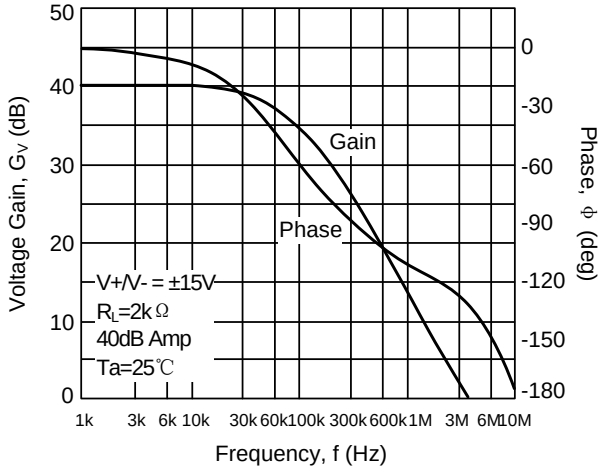
Maximum Output Voltage Swing vs. Frequency



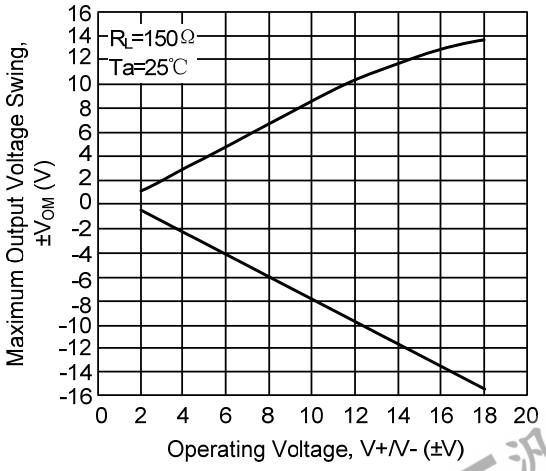
Maximum Output Voltage Swing vs. Output Curren



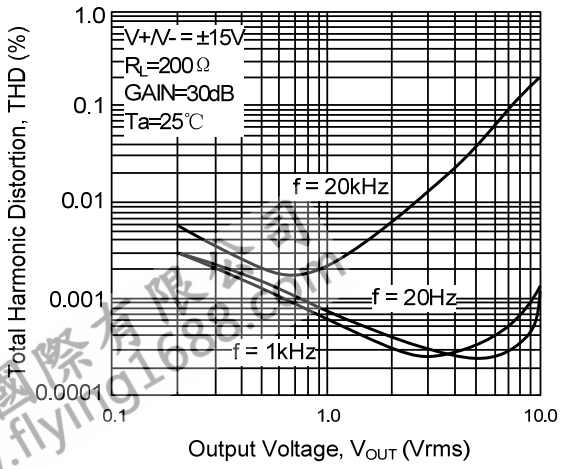
Voltage Gain, Phase Shift vs. Frequency



Maximum Output Voltage Swing vs. Operating Voltage

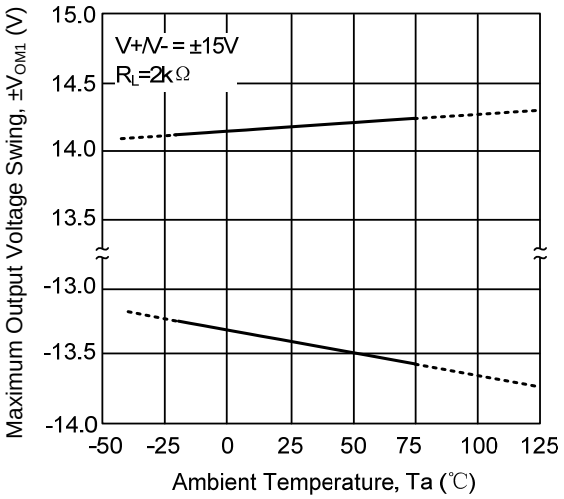


Total Harmonic Distortion vs. Output Voltage Operating Voltage

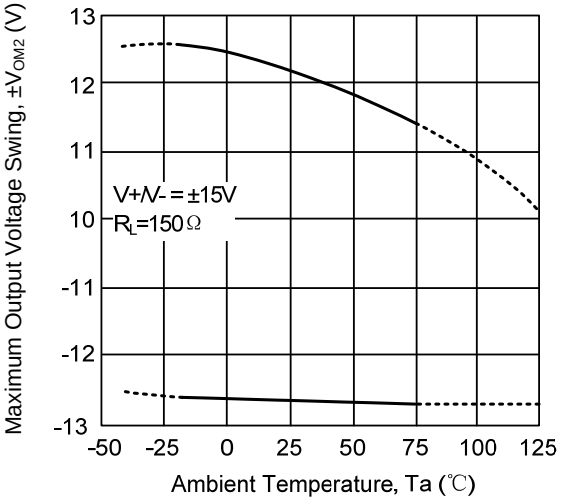


■ TYPICAL CHARACTERISTICS(Cont.)

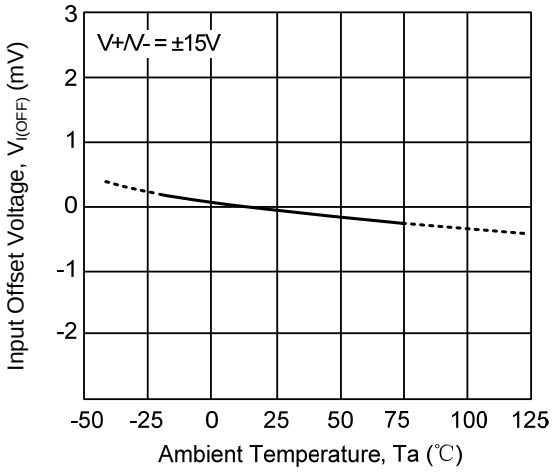
Maximum Output Voltage Swing vs. Temperature



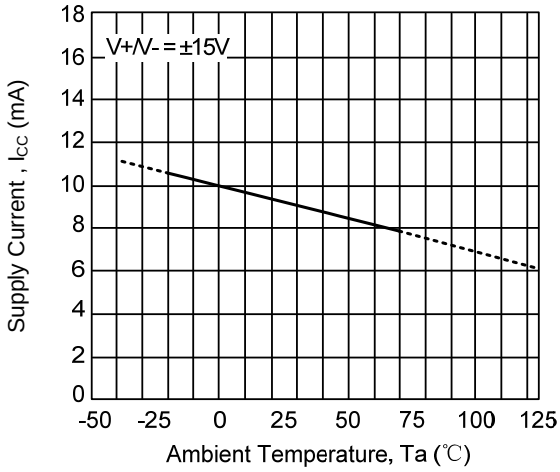
Maximum Output Voltage Swing vs. Temperature



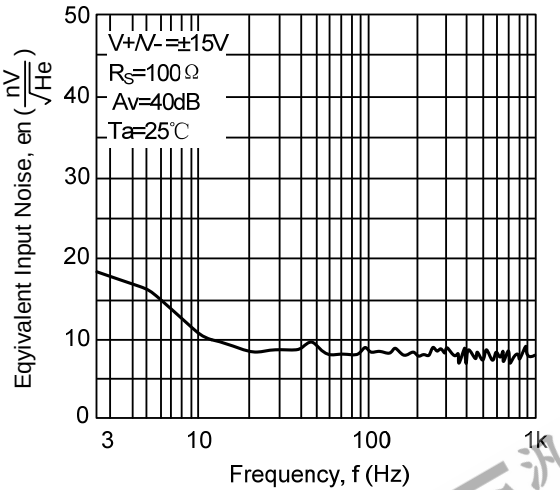
Input Offset Voltage vs. Temperature



Supply Current vs. Temperature



Eqyivalent Input Noise Voltage vs. Frequency



Operating Current vs. Operating Voltage