

DUAL RECORD/PLAY PRE-AMPLIFIER

The KIA6268P is a dual preamplifier with ALC and muting designed for use in record/playback amplifier of tape recorder. It is suitable for a radio cassette tape recorder.

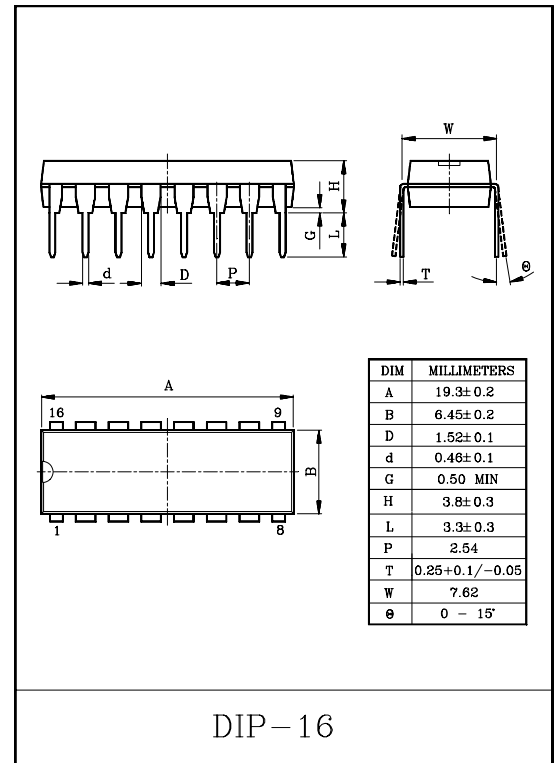
FEATURES

- Built-in ALC detector circuit.
- Built-in muting circuit.
- Operating supply voltage range : $V_{CC}=6\sim 15V$.

MAXIMUM RATINGS ($T_a=25^\circ C$)

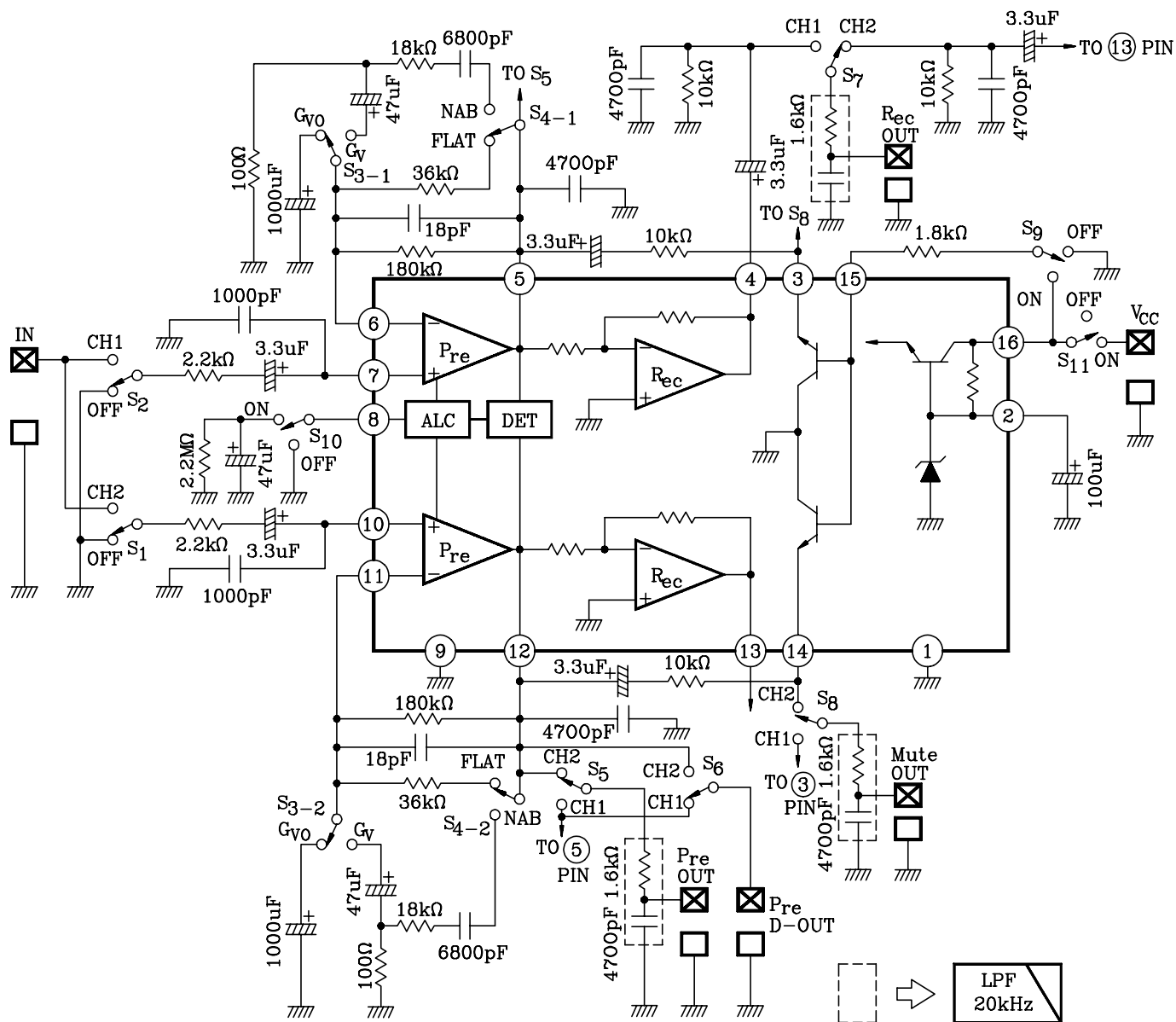
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	16	V
Power Dissipation (Note)	P_D	750	mW
Operating Temperature	T_{opr}	$-25\sim 75$	$^\circ C$
Storage Temperature	T_{stg}	$-55\sim 150$	$^\circ C$

Note : Derated above $T_a=25^\circ C$ in the proportion of $6mW/^\circ C$ for KIA6268P

TYPICAL DC VOLTAGE OF EACH TERMINAL ($V_{CC}=9V, T_a=25^\circ C$, Terminal Voltage at No signal)

TERMINAL NO.	ITEM	SYMBOL	DC VOLTAGE	UNIT
Terminal 1	Rec. GND	V_1	0	V
2	V_s	V_2	8.2	V
3	Mute OUT	V_3	0	V
4	Rec. OUT	V_4	3.3	V
5	Pre. OUT & Rec. IN	V_5	1.3	V
6	Pre. IN NF	V_6	1.3	V
7	Pre. IN	V_7	0	V
8	ALC	V_8	0.9	V
9	Pre. GND	V_9	0	V
10	Pre. IN	V_{10}	0	V
11	Pre. IN NF	V_{11}	1.3	V
12	Pre OUT & Rec. IN	V_{12}	1.3	V
13	Rec. OUT	V_{13}	3.3	V
14	Mute OUT	V_{14}	0	V
15	Mute IN	V_{15}	2.4	V
16	V_{cc}	V_{16}	9.0	V

BLOCK DIAGRAM & TEST CIRCUIT



KIA6268P

ELECTRICAL CHARACTERISTICS (Unless otherwise specified. $V_{CC}=9V$, $f=1kHz$, $T_a=25^{\circ}C$)

CHARACTERISTIC		SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current		I_{CCQ}	1	$V_{IN}=0$	–	8.5	10.5	mA
PRE. AMP	Open Loop Voltage Gain	G_{VO}	1	$V_{IN}=-80dBm$	65	78	–	dB
	Max. Output Voltage	$V_{OM(1)}$	1	THD=1%	0.5	0.8	–	V_{rms}
	Total Harmonic Distortion	THD(1)	1	$V_O=0.2V_{rms}$	–	0.15	0.5	%
	Output Noise Voltage	V_{NO}	1	$R_g=2.2k\Omega$, BW=20Hz~20kHz NAB EQ	–	0.26	0.6	mV_{rms}
	Cross Talk	C.T	1	$R_g=2.2k\Omega$, $V_O=0dBm$	47	60	–	dB
REC. AMP	Closed Loop Voltage Gain	G_V	1	$R_L=10k\Omega$, $V_O=0dBm$	12.7	14.7	16.7	dB
	Max. Output Voltage	$V_{OM(2)}$	1	THD=1%	2.0	2.5	–	V_{rms}
	Total Harmonic Distortion	THD(2)	1	$V_O=1.5V_{rms}$	–	0.2	–	%
	ALC Range (Note)	R_{ALC}	1	$V_{IN}=-60dBm$, $R_{IN}=2.2k\Omega$	–	45	–	dB
	Total Harmonic Distortion (ALC)	THD(ALC)	1	$V_{IN}=-20dBm$, $R_{IN}=2.2k\Omega$, $R_L=10k\Omega$	–	0.3	1.0	%
	ALC Voltage	$V_O(ALC)$	1	$V_{IN}=-20dBm$, $R_{IN}=2.2k\Omega$, $R_L=10k\Omega$	0.9	1.1	1.42	V_{rms}
Muting Attenuation		ATT	1	–	45	55	–	dB
ALC Balance		B_{ALC}	1	$V_{IN}=-20dBm$	–	0	2	dB

Note : Input voltage range from $V_{IN}=-60dBm$ to output voltage V_{OUT} 3dB up.

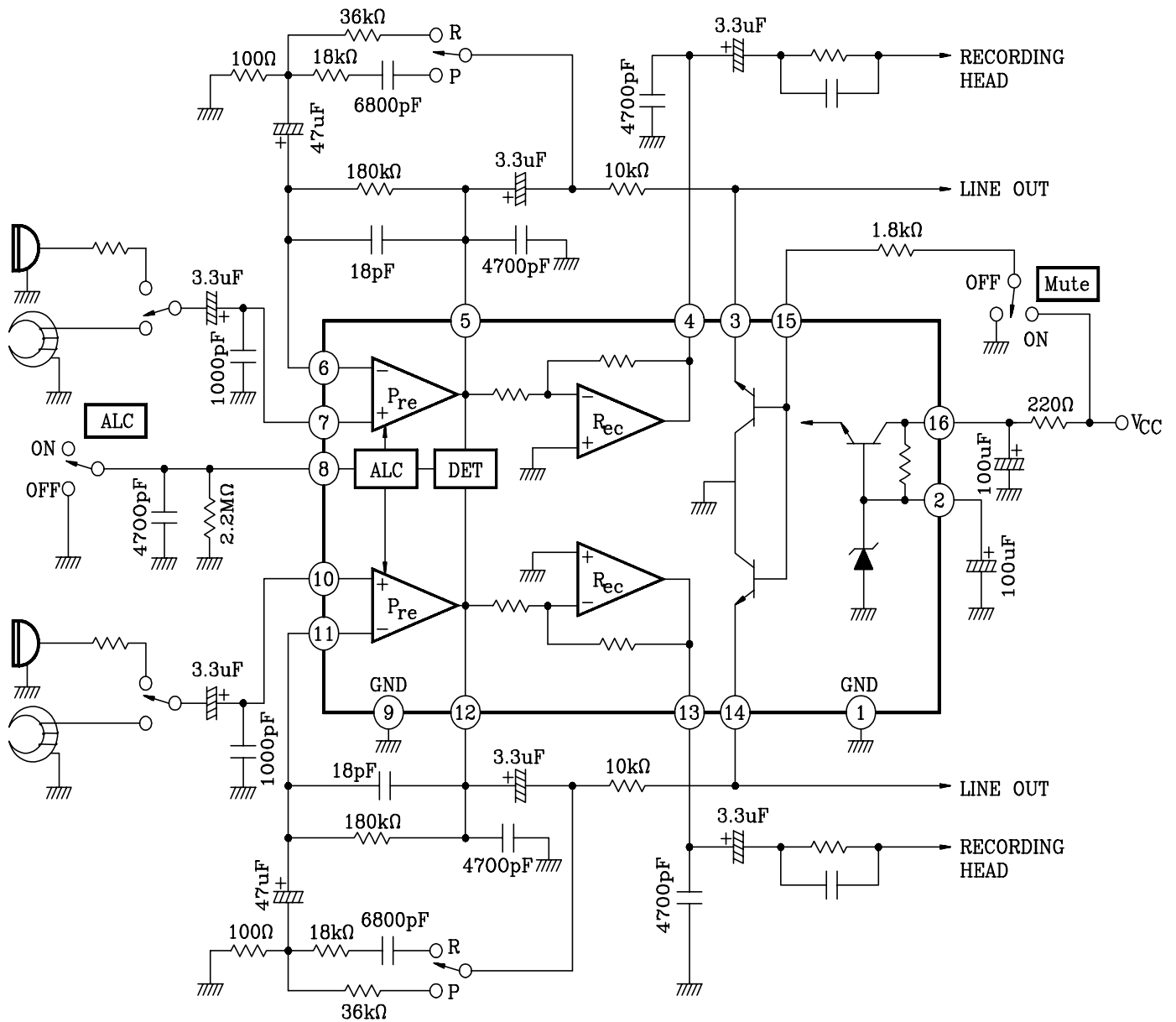
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TEST METHOD

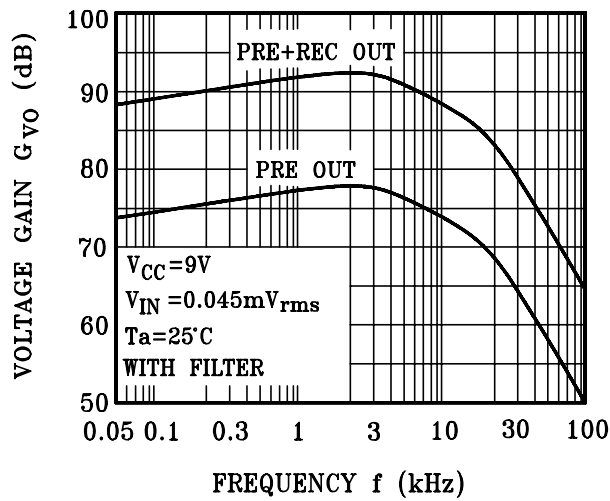
SW SYMBOL	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	MEASURE TERMINAL
I _{CCQ}	※	※	※	※	※	※	※	※	OFF	※	V _{CC}
G _{VO}	OFF	CH1	G _{VO}	FLAT	CH1	※	※	※	OFF	OFF	Pre OUT
V _{OM} (1)	OFF	CH1	G _V	NAB	CH1	※	※	※	OFF	OFF	Pre OUT
THD(1)	OFF	CH1	G _V	NAB	CH1	※	※	※	OFF	OFF	Pre OUT
V _{NO}	OFF	OFF	G _V	NAB	CH2	CH1	※	※	OFF	OFF	Pre D-OUT
C.T.	OFF	CH1	G _V	FLAT	CH1 →CH2	※	※	※	OFF	OFF	Pre OUT
G _V	OFF	CH1	G _V	FLAT	CH1	※	CH1	CH2	OFF	OFF	Pre OUT→Rec OUT
V _{OM} (2)	OFF	CH1	G _V	FLAT	CH2	※	CH1	CH2	OFF	OFF	Rec OUT
THD(2)	OFF	CH1	G _V	FLAT	CH2	※	CH1	CH2	OFF	OFF	Rec OUT
R _{ALC}	OFF	CH1	G _V	FLAT	CH2	※	CH1	CH2	OFF	ON	Rec OUT
THD(ALC)	OFF	CH1	G _V	FLAT	CH2	※	CH1	CH2	OFF	ON	Rec OUT
V _O (ALC)	OFF	CH1	G _V	FLAT	CH2	※	CH1	CH2	OFF	ON	Rec OUT
ATT	OFF	CH1	G _V	FLAT	CH1	※	※	CH1	OFF →ON	OFF	Mute OUT
B _{ALC}	CH2	CH1 →CH2	G _V	FLAT	※	※	CH1 →CH2	※	OFF	ON	Rec OUT

※ : No specified.

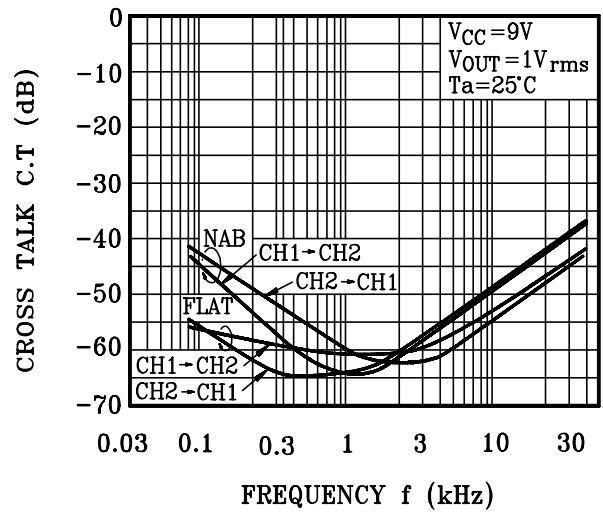
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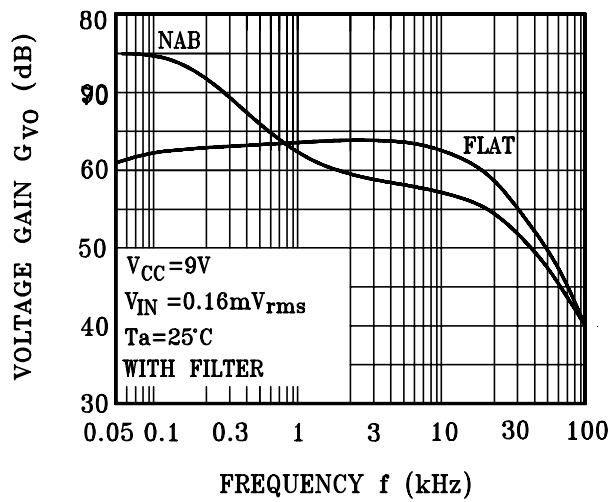
$G_{VO} - f$



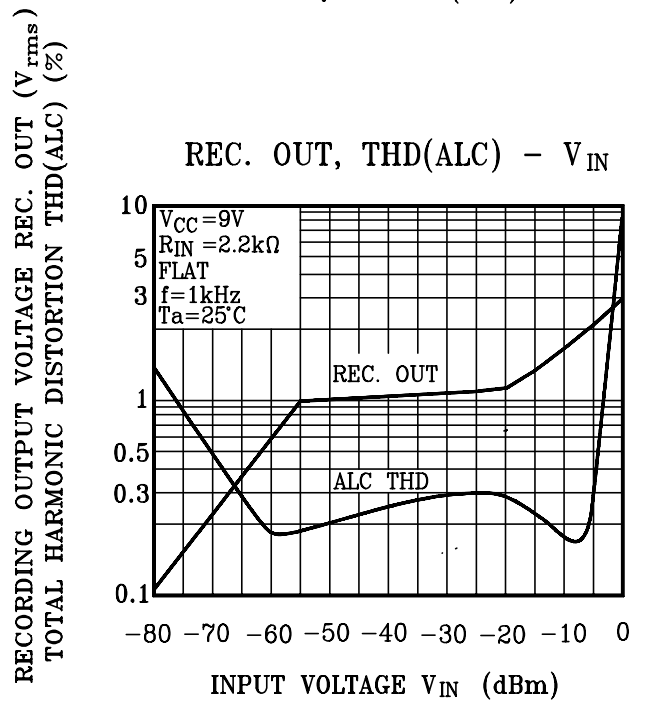
$C.T - f$



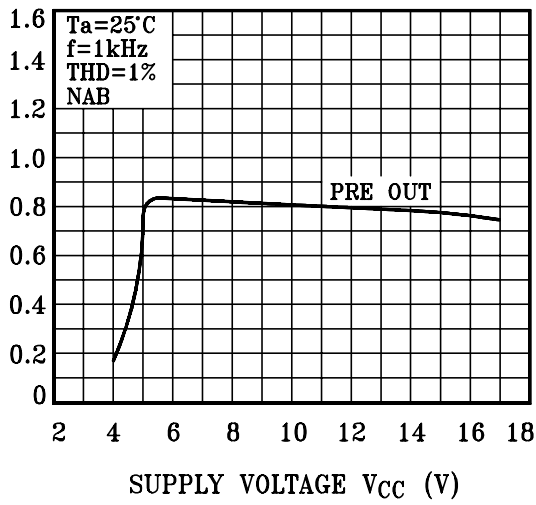
$G_V - f$



REC. OUT, THD(ALC) - V_{IN}

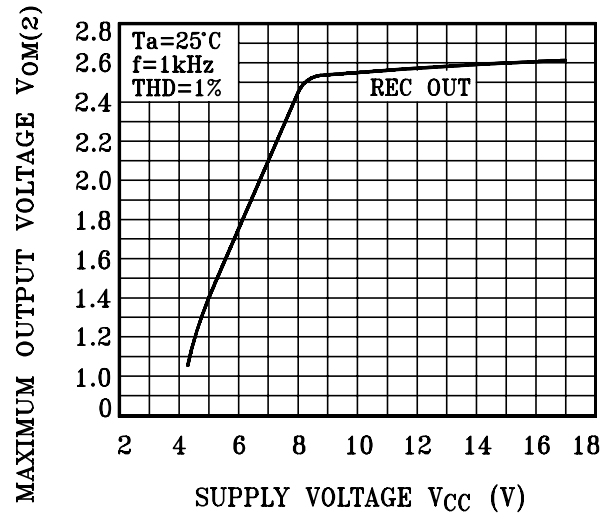


$V_{OM(1)} - V_{CC}$



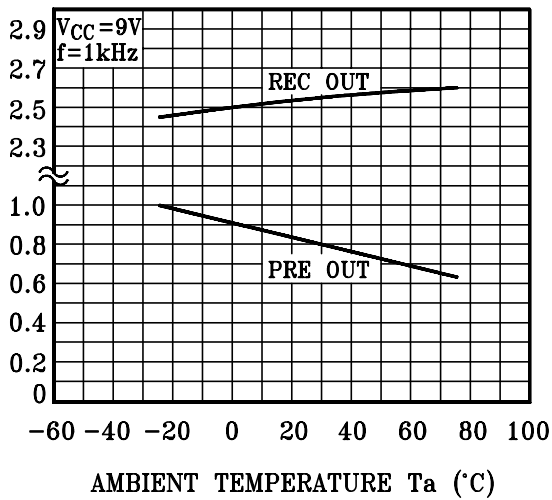
(V)

$V_{OM(2)} - V_{CC}$



MAXIMUM OUTPUT VOLTAGE $V_{OM(2)}$

$V_{OM(1)}, V_{OM(2)} - T_a$



$I_{CCQ} - V_{CC}$

QUIESCENT CURRENT I_{CCQ} (mA)

