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## 100mW STEREO HEADPHONE AMPLIFIER WITH STANDBY MODE

- OPERATING FROM  $V_{CC}=2V$  to 5.5V
- **STANDBY MODE ACTIVE LOW** (TS486) or HIGH (TS487)
- **OUTPUT POWER:** 102mW @5V, 38mW @3.3V into 16Ω with 0.1% THD+N max (1kHz)
- **LOW CURRENT CONSUMPTION:** 2.5mA max
- High Signal-to-Noise ratio: 103dB(A) at 5V
- High Crosstalk immunity: 83dB (F=1kHz)
- PSRR: 58 dB (F=1kHz), inputs grounded
- ON/OFF click reduction circuitry
- Unity-Gain Stable
- **SHORT CIRCUIT LIMITATION**
- Available in SO8, MiniSO8 & DFN 3x3mm

### DESCRIPTION

The TS486/7 is a dual audio power amplifier capable of driving, in single-ended mode, either a 16 or a 32Ω stereo headset.

Capable of descending to low voltages, it delivers up to 90mW per channel (into 16Ω loads) of continuous average power with 0.3% THD+N in the audio bandwidth from a 5V power supply.

An externally-controlled standby mode reduces the supply current to 10nA (typ.). The unity gain stable TS486/7 can be configured by external gain-setting resistors or used in a fixed gain version.

### APPLICATIONS

- Headphone Amplifier
- Mobile phone, PDA, computer motherboard
- High end TV, portable audio player

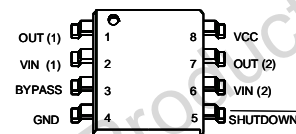
### ORDER CODE

Part Number	Temperature Range: I	Package			Gain	Marking	
		D	S	Q			
TS486	-40, +85°C	•			external	TS486I	
TS487		•			external	TS487I	
TS486			•	•		external	K86A
TS486-1		tba	tba		x1/0dB	K86B	
TS486-2		tba	tba		x2/6dB	K86C	
TS486-4		tba	tba		x4/12dB	K86D	
TS487			•	•		external	K87A
TS487-1		tba	tba		x1/0dB	K87B	
TS487-2		tba	tba		x2/6dB	K87C	
TS487-4		tba	tba		x4/12dB	K87D	

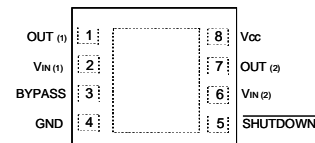
MiniSO & DFN only available in Tape & Reel with T suffix, SO is available in Tube (D) and in Tape & Reel (DT)

### PIN CONNECTIONS (top view)

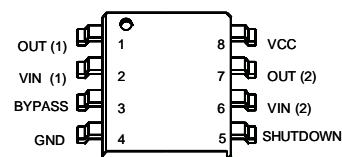
**TS486IDT: SO8, TS486IST, TS486-1IST, TS486-2IST, TS486-4IST: MiniSO8**



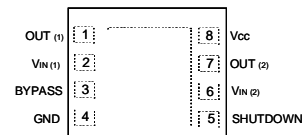
**TS486-IQT, TS486-1IQT, TS486-2IQT, TS486-4IQT: DFN8**



**TS487IDT: SO8, TS487IST, TS487-1IST, TS487-2IST, TS487-4IST: MiniSO8**



**TS487-IQT, TS487-1IQT, TS487-2IQT, TS487-4IQT: DFN8**



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply voltage <sup>1)</sup>	6	V
V <sub>i</sub>	Input Voltage	-0.3v to V <sub>CC</sub> +0.3v	V
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C
T <sub>j</sub>	Maximum Junction Temperature	150	°C
R <sub>thja</sub>	Thermal Resistance Junction to Ambient SO8 MiniSO8 DFN8	175 215 70	°C/W
Pd	Power Dissipation <sup>2)</sup> SO8 MiniSO8 DFN8	0.71 0.58 1.79	W
ESD	Human Body Model (pin to pin): TS486, TS487 <sup>3)</sup>	1.5	kV
ESD	Machine Model - 220pF - 240pF (pin to pin)	100	V
Latch-up	Latch-up Immunity (All pins)	200	mA
	Lead Temperature (soldering, 10sec)	250	°C
	Output Short-Circuit to V <sub>CC</sub> or GND	continuous <sup>4)</sup>	

1. All voltage values are measured with respect to the ground pin.
2. Pd has been calculated with Tamb = 25°C, Tjunction = 150°C.
3. TS487 stands 1.5KV on all pins except standby pin which stands 1KV.
4. Attention must be paid to continuous power dissipation (V<sub>DD</sub> x 300mA). Exposure of the IC to a short circuit for an extended time period is dramatically reducing product life expectancy.

**OPERATING CONDITIONS**

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	2 to 5.5	V
R <sub>L</sub>	Load Resistor	≥ 16	Ω
T <sub>oper</sub>	Operating Free Air Temperature Range	-40 to + 85	°C
C <sub>L</sub>	Load Capacitor R <sub>L</sub> = 16 to 100Ω R <sub>L</sub> > 100Ω	400 100	pF
V <sub>STB</sub>	Standby Voltage Input TS486 ACTIVE / TS487 in STANDBY TS486 in STANDBY / TS487 ACTIVE	1.5 ≤ V <sub>STB</sub> ≤ V <sub>CC</sub> GND ≤ V <sub>STB</sub> ≤ 0.4 <sup>1)</sup>	V
R <sub>THJA</sub>	Thermal Resistance Junction to Ambient SO8 MiniSO8 DFN8 <sup>2)</sup>	150 190 41	°C/W

1. The minimum current consumption (I<sub>STANDBY</sub>) is guaranteed at GND (TS486) or V<sub>CC</sub> (TS487) for the whole temperature range.
2. When mounted on a 4-layer PCB.

**FIXED GAIN VERSION SPECIFIC ELECTRICAL CHARACTERISTICS**

V<sub>CC</sub> from +5V to +2V, GND = 0V, T<sub>amb</sub> = 25°C (unless otherwise specified)

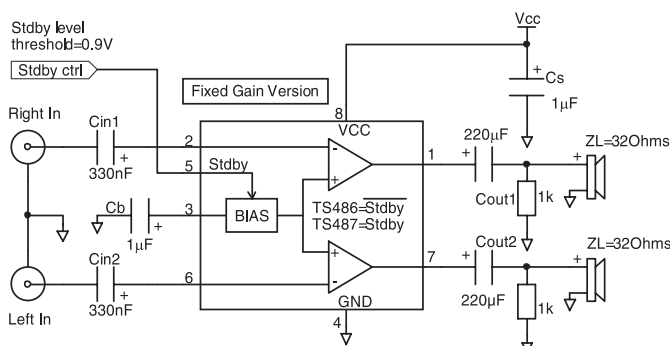
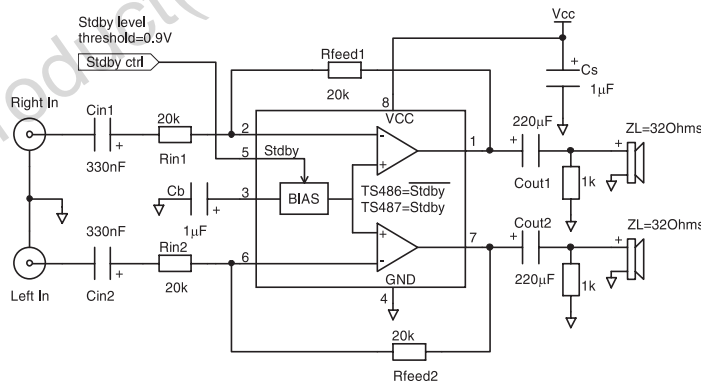
Symbol	Parameter	Min.	Typ.	Max.	Unit
R <sub>IN 1,2</sub>	Input Resistance <sup>1)</sup>		20		kΩ
G	Gain value for Gain TS486/TS487-1 Gain value for Gain TS486/TS487-2 Gain value for Gain TS486/TS487-4		0dB 6dB 12dB		dB

1. See figure 30 to establish the value of C<sub>in</sub> vs. -3dB cut off frequency.

**APPLICATION COMPONENTS INFORMATION**

Components	Functional Description
R <sub>IN1,2</sub>	Inverting input resistor which sets the closed loop gain in conjunction with R <sub>FEED</sub> . This resistor also forms a high pass filter with C <sub>IN</sub> ( $f_c = 1 / (2 \times \text{Pi} \times R_{IN} \times C_{IN})$ ). <b>Not needed in fixed gain versions.</b>
C <sub>IN1,2</sub>	Input coupling capacitor which blocks the DC voltage at the amplifier's input terminal.
R <sub>FEED1,2</sub>	Feedback resistor which sets the closed loop gain in conjunction with R <sub>IN</sub> . $A_v = \text{Closed Loop Gain} = -R_{FEED}/R_{IN}$ . <b>Not needed in fixed gain versions.</b>
C <sub>S</sub>	Supply Bypass capacitor which provides power supply filtering.
C <sub>B</sub>	Bypass capacitor which provides half supply filtering.
C <sub>OUT1,2</sub>	Output coupling capacitor which blocks the DC voltage at the load input terminal. This capacitor also forms a high pass filter with R <sub>L</sub> ( $f_c = 1 / (2 \times \text{Pi} \times R_L \times C_{OUT})$ ).

**TYPICAL APPLICATION SCHEMATICS**



**ELECTRICAL CHARACTERISTICS**

$V_{CC} = +5V$ ,  $GND = 0V$ ,  $T_{amb} = 25^{\circ}C$  (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
$I_{CC}$	Supply Current No input signal, no load		1.8	2.5	mA
$I_{STANDBY}$	Standby Current No input signal, $V_{STANDBY}=GND$ for TS486, $R_L=32\Omega$ No input signal, $V_{STANDBY}=V_{CC}$ for TS487, $R_L=32\Omega$		10	1000	nA
$V_{IO}$	Input Offset Voltage ( $V_{ICM} = V_{CC}/2$ )		1		mV
$I_{IB}$	Input Bias Current ( $V_{ICM} = V_{CC}/2$ ) <sup>1)</sup>		90	200	nA
$P_O$	Output Power THD+N = 0.1% Max, $F = 1kHz$ , $R_L = 32\Omega$ THD+N = 1% Max, $F = 1kHz$ , $R_L = 32\Omega$ THD+N = 0.1% Max, $F = 1kHz$ , $R_L = 16\Omega$ THD+N = 1% Max, $F = 1kHz$ , $R_L = 16\Omega$	60 95	64 65 102 108		mW
THD + N	Total Harmonic Distortion + Noise ( $A_v=-1$ ) $R_L = 32\Omega$ , $P_{out} = 60mW$ , $20Hz \leq F \leq 20kHz$ $R_L = 16\Omega$ , $P_{out} = 90mW$ , $20Hz \leq F \leq 20kHz$		0.3 0.3		%
PSRR	Power Supply Rejection Ratio, inputs grounded <sup>2)</sup> ( $A_v=-1$ ), $R_L \geq 16\Omega$ , $C_B=1\mu F$ , $F = 1kHz$ , $V_{ripple} = 200mV_{pp}$	53	58		dB
$I_O$	Max Output Current THD +N $\leq 1\%$ , $R_L = 16\Omega$ connected between out and $V_{CC}/2$	106	115		mA
$V_O$	Output Swing $V_{OL} : R_L = 32\Omega$ $V_{OH} : R_L = 32\Omega$ $V_{OL} : R_L = 16\Omega$ $V_{OH} : R_L = 16\Omega$	4.45 4.2	0.45 4.52 0.6 4.35	0.5 0.7	V
SNR	Signal-to-Noise Ratio (A weighted, $A_v=-1$ ) <sup>2)</sup> ( $R_L = 32\Omega$ , THD +N < 0.4%, $20Hz \leq F \leq 20kHz$ )	80	103		dB
Crosstalk	Channel Separation, $R_L = 32\Omega$ , $A_v=-1$ $F = 1kHz$ $F = 20Hz$ to $20kHz$ Channel Separation, $R_L = 16\Omega$ , $A_v=-1$ $F = 1kHz$ $F = 20Hz$ to $20kHz$		83 79 80 72		dB
$C_I$	Input Capacitance		1		pF
GBP	Gain Bandwidth Product ( $R_L = 32\Omega$ )		1.1		MHz
SR	Slew Rate, Unity Gain Inverting ( $R_L = 16\Omega$ )		0.4		V/ $\mu s$

1. Only for external gain version.

2. Guaranteed by design and evaluation.

## ELECTRICAL CHARACTERISTICS

$V_{CC} = +3.3V$ ,  $GND = 0V$ ,  $T_{amb} = 25^{\circ}C$  (unless otherwise specified) <sup>1)</sup>

Symbol	Parameter	Min.	Typ.	Max.	Unit
$I_{CC}$	Supply Current No input signal, no load		1.8	2.5	mA
$I_{STANDBY}$	Standby Current No input signal, $V_{STANDBY}=GND$ for TS486, $R_L=32\Omega$ No input signal, $V_{STANDBY}=V_{CC}$ for TS487, $R_L=32\Omega$		10	1000	nA
$V_{IO}$	Input Offset Voltage ( $V_{ICM} = V_{CC}/2$ )		1		mV
$I_{IB}$	Input Bias Current ( $V_{ICM} = V_{CC}/2$ ) <sup>2)</sup>		90	200	nA
$P_O$	Output Power THD+N = 0.1% Max, $F = 1kHz$ , $R_L = 32\Omega$ THD+N = 1% Max, $F = 1kHz$ , $R_L = 32\Omega$ THD+N = 0.1% Max, $F = 1kHz$ , $R_L = 16\Omega$ THD+N = 1% Max, $F = 1kHz$ , $R_L = 16\Omega$	23 36	26 28 38 42		mW
THD + N	Total Harmonic Distortion + Noise ( $A_v=-1$ ) $R_L = 32\Omega$ , $P_{out} = 16mW$ , $20Hz \leq F \leq 20kHz$ $R_L = 16\Omega$ , $P_{out} = 35mW$ , $20Hz \leq F \leq 20kHz$		0.3 0.3		%
PSRR	Power Supply Rejection Ratio, inputs grounded <sup>3)</sup> ( $A_v=-1$ ), $R_L \geq 16\Omega$ , $C_B=1\mu F$ , $F = 1kHz$ , $V_{ripple} = 200mV_{pp}$	53	58		dB
$I_O$	Max Output Current THD + N $\leq 1\%$ , $R_L = 16\Omega$ connected between out and $V_{CC}/2$	64	75		mA
$V_O$	Output Swing $V_{OL} : R_L = 32\Omega$ $V_{OH} : R_L = 32\Omega$ $V_{OL} : R_L = 16\Omega$ $V_{OH} : R_L = 16\Omega$	2.85 2.68	0.3 3 0.45 2.85	0.38 0.52	V
SNR	Signal-to-Noise Ratio (A weighted, $A_v=-1$ ) <sup>3)</sup> ( $R_L = 32\Omega$ , THD + N < 0.4%, $20Hz \leq F \leq 20kHz$ )	80	98		dB
Crosstalk	Channel Separation, $R_L = 32\Omega$ , $A_v=-1$ $F = 1kHz$ $F = 20Hz$ to $20kHz$ Channel Separation, $R_L = 16\Omega$ , $A_v=-1$ $F = 1kHz$ $F = 20Hz$ to $20kHz$		80 76 77 69		dB
$C_I$	Input Capacitance		1		pF
GBP	Gain Bandwidth Product ( $R_L = 32\Omega$ )		1.1		MHz
SR	Slew Rate, Unity Gain Inverting ( $R_L = 16\Omega$ )		0.4		V/ $\mu s$

1. All electrical values are guaranteed with correlation measurements at 2V and 5V.

2. Only for external gain version.

3. Guaranteed by design and evaluation.

**ELECTRICAL CHARACTERISTICS**

$V_{CC} = +2.5V$ ,  $GND = 0V$ ,  $T_{amb} = 25^{\circ}C$  (unless otherwise specified)<sup>1)</sup>

Symbol	Parameter	Min.	Typ.	Max.	Unit
$I_{CC}$	Supply Current No input signal, no load		1.7	2.5	mA
$I_{STANDBY}$	Standby Current No input signal, $V_{STANDBY}=GND$ for TS486, $R_L=32\Omega$ No input signal, $V_{STANDBY}=V_{CC}$ for TS487, $R_L=32\Omega$		10	1000	nA
$V_{IO}$	Input Offset Voltage ( $V_{ICM} = V_{CC}/2$ )		1		mV
$I_{IB}$	Input Bias Current ( $V_{ICM} = V_{CC}/2$ ) <sup>2)</sup>		90	200	nA
$P_O$	Output Power THD+N = 0.1% Max, F = 1kHz, $R_L = 32\Omega$ THD+N = 1% Max, F = 1kHz, $R_L = 32\Omega$ THD+N = 0.1% Max, F = 1kHz, $R_L = 16\Omega$ THD+N = 1% Max, F = 1kHz, $R_L = 16\Omega$	12.5 17.5	13 14 21 22		mW
THD + N	Total Harmonic Distortion + Noise ( $A_v=-1$ ) $R_L = 32\Omega$ , $P_{out} = 10mW$ , $20Hz \leq F \leq 20kHz$ $R_L = 16\Omega$ , $P_{out} = 16mW$ , $20Hz \leq F \leq 20kHz$		0.3 0.3		%
PSRR	Power Supply Rejection Ratio, inputs grounded <sup>3)</sup> ( $A_v=-1$ ), $R_L \geq 16\Omega$ , $C_B=1\mu F$ , F = 1kHz, Vripple = 200mVpp	53	58		dB
$I_O$	Max Output Current THD +N $\leq 1\%$ , $R_L = 16\Omega$ connected between out and $V_{CC}/2$	45	56		mA
$V_O$	Output Swing $V_{OL} : R_L = 32\Omega$ $V_{OH} : R_L = 32\Omega$ $V_{OL} : R_L = 16\Omega$ $V_{OH} : R_L = 16\Omega$	2.14 1.97	0.25 2.25 0.35 2.15	0.32 0.45	V
SNR	Signal-to-Noise Ratio (A weighted, $A_v=-1$ ) <sup>3)</sup> ( $R_L = 32\Omega$ , THD +N < 0.4%, $20Hz \leq F \leq 20kHz$ )	80	95		dB
Crosstalk	Channel Separation, $R_L = 32\Omega$ , $A_v=-1$ F = 1kHz F = 20Hz to 20kHz Channel Separation, $R_L = 16\Omega$ , $A_v=-1$ F = 1kHz F = 20Hz to 20kHz		80 76 77 69		dB
$C_I$	Input Capacitance		1		pF
GBP	Gain Bandwidth Product ( $R_L = 32\Omega$ )		1.1		MHz
SR	Slew Rate, Unity Gain Inverting ( $R_L = 16\Omega$ )		0.4		V/ $\mu s$

1. All electrical values are guaranteed with correlation measurements at 2V and 5V.

2. Only for external gain version.

3. Guaranteed by design and evaluation.

**ELECTRICAL CHARACTERISTICS**

$V_{CC} = +2V$ ,  $GND = 0V$ ,  $T_{amb} = 25^{\circ}C$  (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
$I_{CC}$	Supply Current No input signal, no load		1.7	2.5	mA
$I_{STANDBY}$	Standby Current No input signal, $V_{STANDBY}=GND$ for TS486, $R_L=32\Omega$ No input signal, $V_{STANDBY}=V_{CC}$ for TS487, $R_L=32\Omega$		10	1000	nA
$V_{IO}$	Input Offset Voltage ( $V_{ICM} = V_{CC}/2$ )		1		mV
$I_{IB}$	Input Bias Current ( $V_{ICM} = V_{CC}/2$ ) <sup>1)</sup>		90	200	nA
$P_O$	Output Power THD+N = 0.1% Max, F = 1kHz, $R_L = 32\Omega$ THD+N = 1% Max, F = 1kHz, $R_L = 32\Omega$ THD+N = 0.3% Max, F = 1kHz, $R_L = 16\Omega$ THD+N = 1% Max, F = 1kHz, $R_L = 16\Omega$	7 9.5	8 9 12 13		mW
THD + N	Total Harmonic Distortion + Noise ( $A_v=-1$ ) $R_L = 32\Omega$ , $P_{out} = 6.5mW$ , $20Hz \leq F \leq 20kHz$ $R_L = 16\Omega$ , $P_{out} = 8mW$ , $20Hz \leq F \leq 20kHz$		0.3 0.3		%
PSRR	Power Supply Rejection Ratio, inputs grounded <sup>2)</sup> ( $A_v=-1$ ), $R_L \geq 16\Omega$ , $C_B=1\mu F$ , F = 1kHz, $V_{ripple} = 200mV_{pp}$	52	57		dB
$I_O$	Max Output Current THD + N $\leq 1\%$ , $R_L = 16\Omega$ connected between out and $V_{CC}/2$	33	41		mA
$V_O$	Output Swing $V_{OL} : R_L = 32\Omega$ $V_{OH} : R_L = 32\Omega$ $V_{OL} : R_L = 16\Omega$ $V_{OH} : R_L = 16\Omega$	1.67 1.53	0.24 1.73 0.33 1.63	0.29 0.41	V
SNR	Signal-to-Noise Ratio (A weighted, $A_v=-1$ ) <sup>2)</sup> ( $R_L = 32\Omega$ , THD + N < 0.4%, $20Hz \leq F \leq 20kHz$ )	80	93		dB
Crosstalk	Channel Separation, $R_L = 32\Omega$ , $A_v=-1$ F = 1kHz F = 20Hz to 20kHz Channel Separation, $R_L = 16\Omega$ , $A_v=-1$ F = 1kHz F = 20Hz to 20kHz		80 76 77 69		dB
$C_I$	Input Capacitance		1		pF
GBP	Gain Bandwidth Product ( $R_L = 32\Omega$ )		1.1		MHz
SR	Slew Rate, Unity Gain Inverting ( $R_L = 16\Omega$ )		0.4		V/ $\mu s$

1. Only for external gain version.

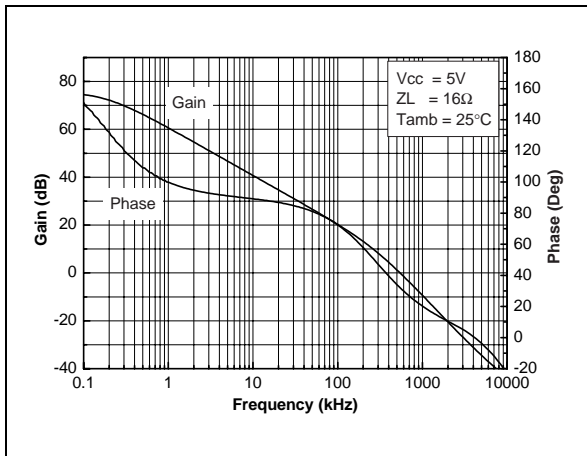
2. Guaranteed by design and evaluation.



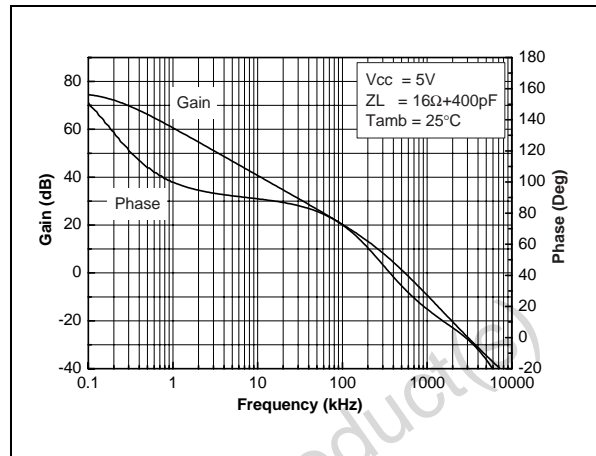
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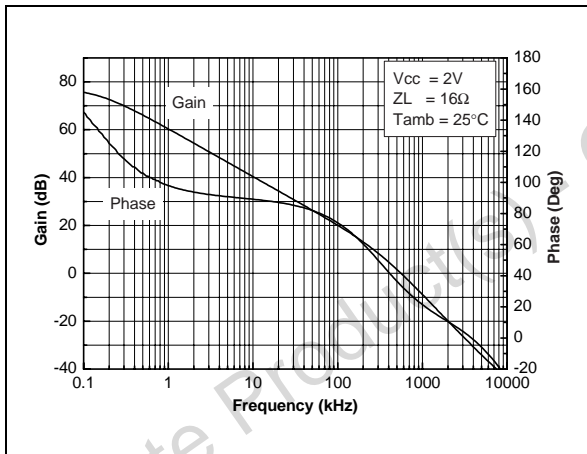
**Fig. 1: Open Loop Gain and Phase vs Frequency**



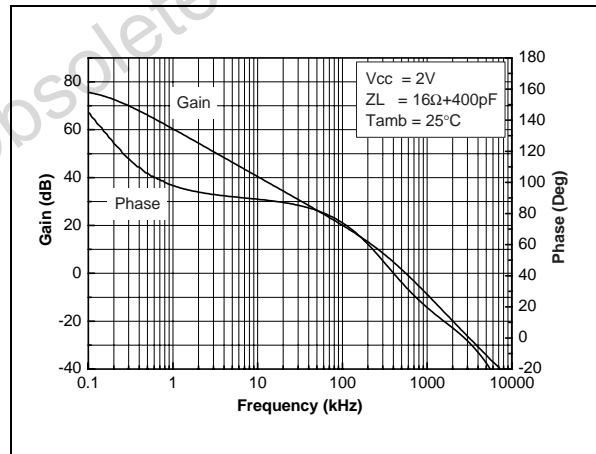
**Fig. 2: Open Loop Gain and Phase vs Frequency**



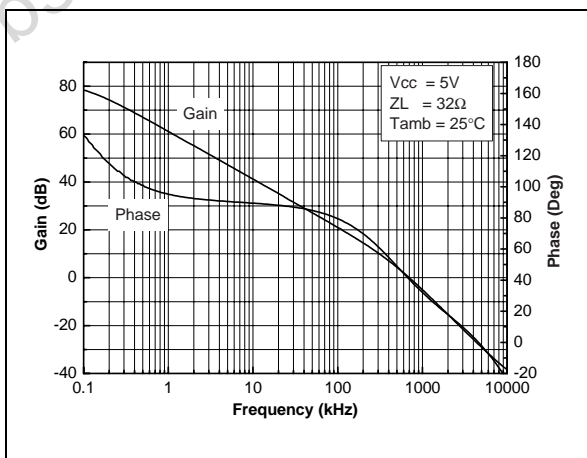
**Fig. 3: Open Loop Gain and Phase vs Frequency**



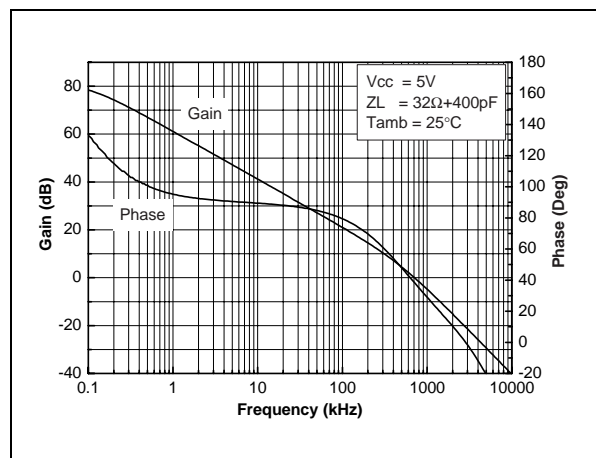
**Fig. 4: Open Loop Gain and Phase vs Frequency**



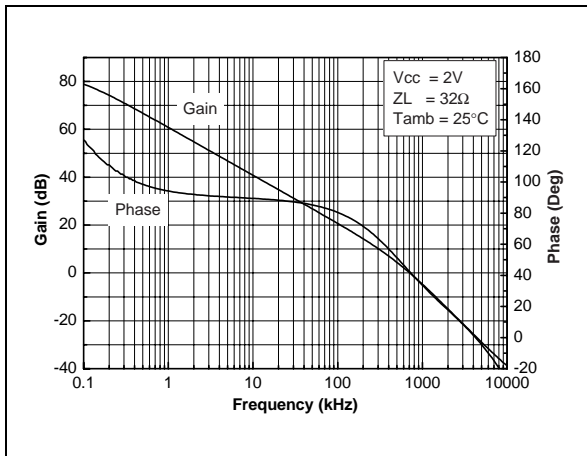
**Fig. 5: Open Loop Gain and Phase vs Frequency**



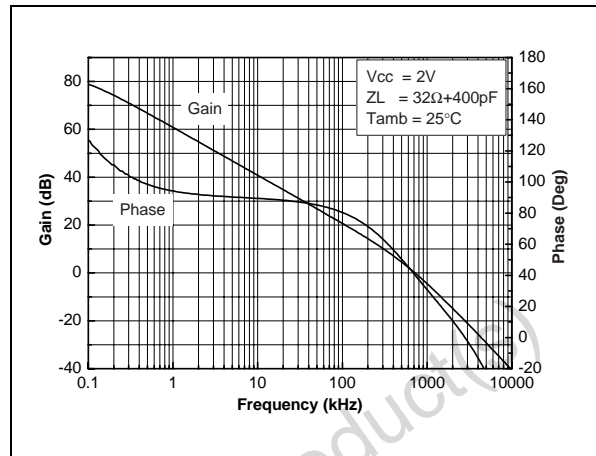
**Fig. 6: Open Loop Gain and Phase vs Frequency**



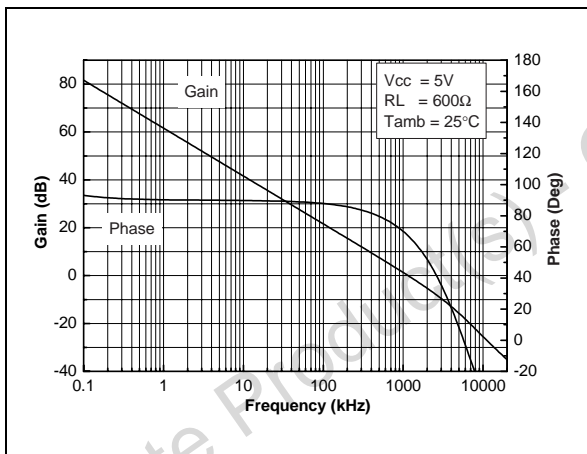
**Fig. 7: Open Loop Gain and Phase vs Frequency**



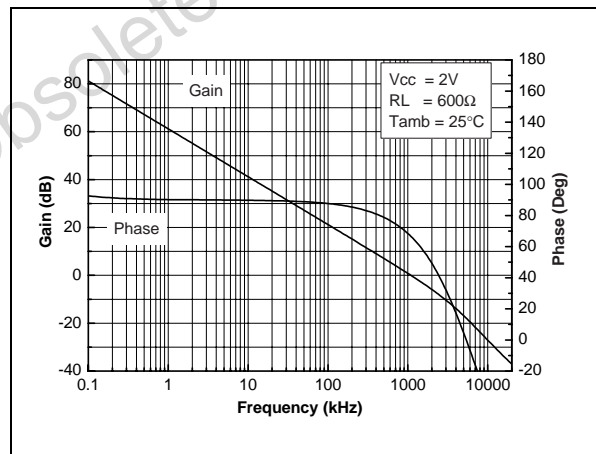
**Fig. 8: Open Loop Gain and Phase vs Frequency**



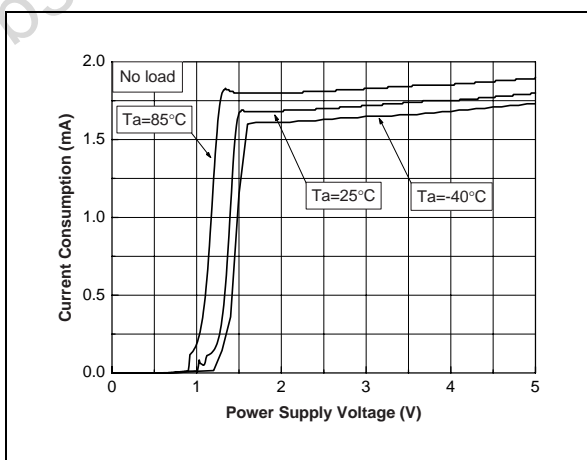
**Fig. 9: Open Loop Gain and Phase vs Frequency**



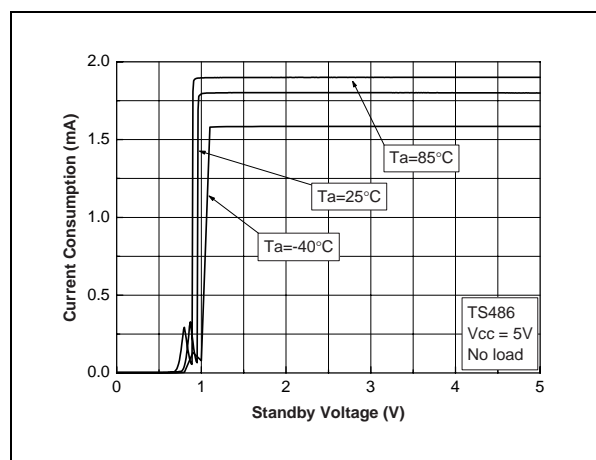
**Fig. 10: Open Loop Gain and Phase vs Frequency**



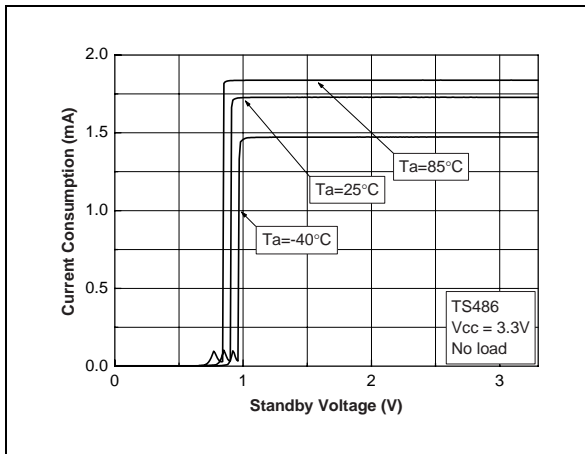
**Fig. 11: Current Consumption vs Power Supply Voltage**



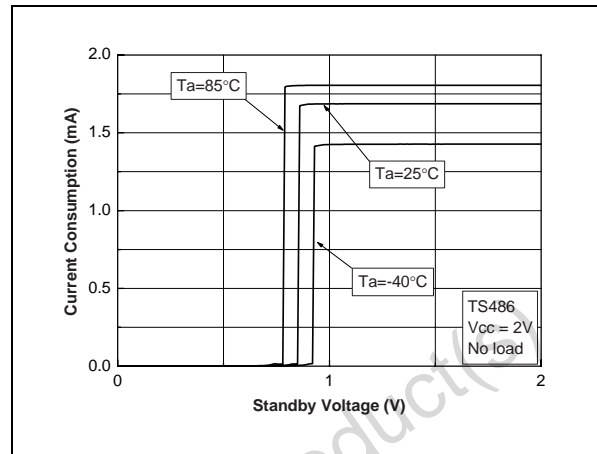
**Fig. 12: Current Consumption vs Standby Voltage**



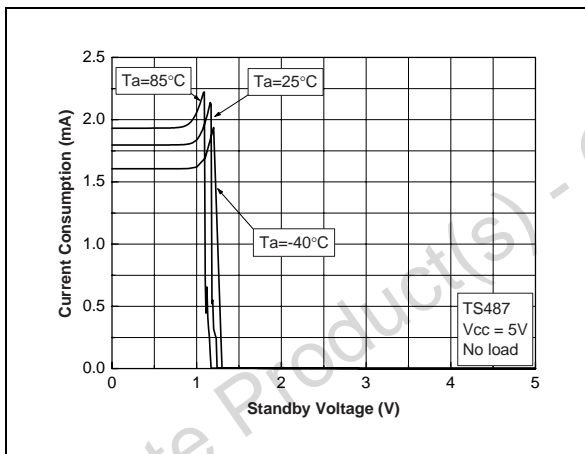
**Fig. 13: Current Consumption vs Standby Voltage**



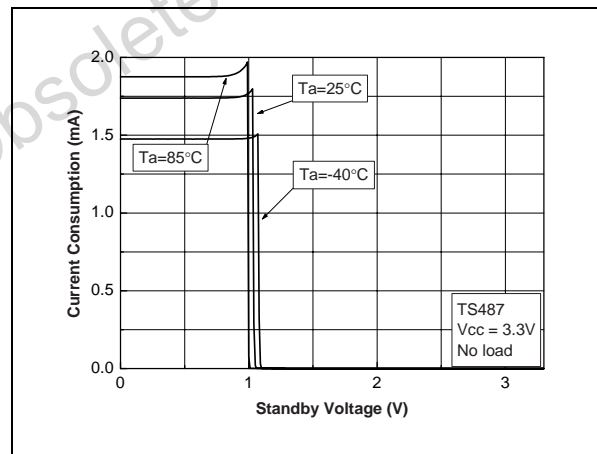
**Fig. 14: Current Consumption vs Standby Voltage**



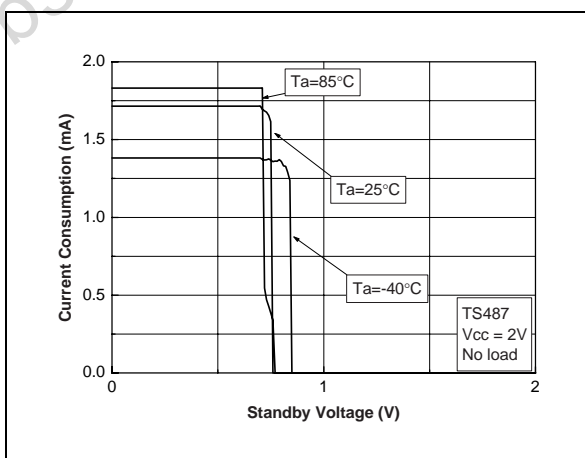
**Fig. 15: Current Consumption vs Standby Voltage**



**Fig. 16: Current Consumption vs Standby Voltage**



**Fig. 17: Current Consumption vs Standby Voltage**



**Fig. 18: Output Power vs Power Supply Voltage**

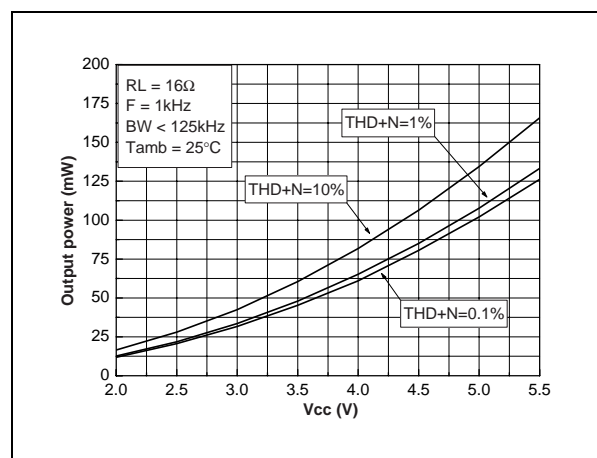


Fig. 19: Output Power vs Power Supply Voltage

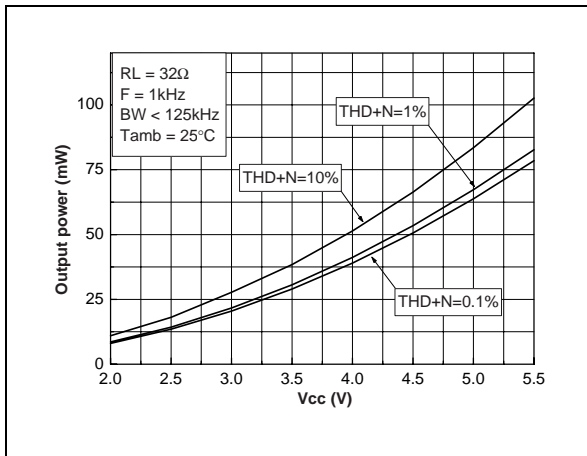


Fig. 20: Output Power vs Load Resistor

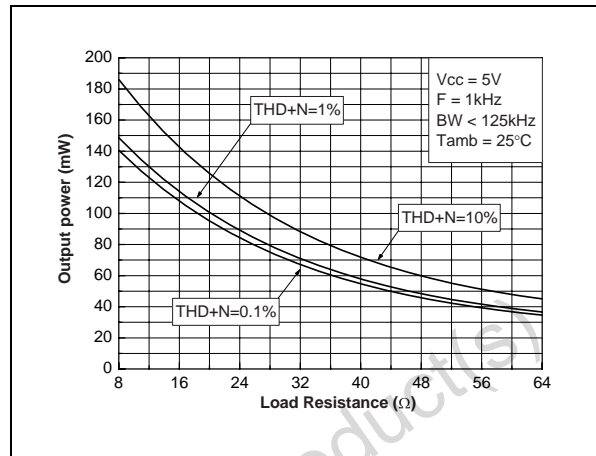


Fig. 21: Output Power vs Load Resistor

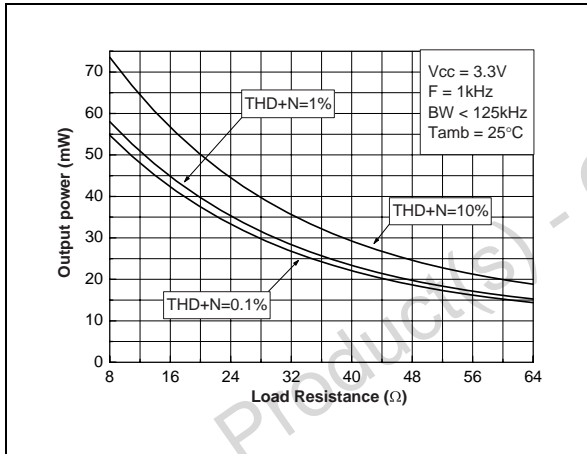


Fig. 22: Output Power vs Load Resistor

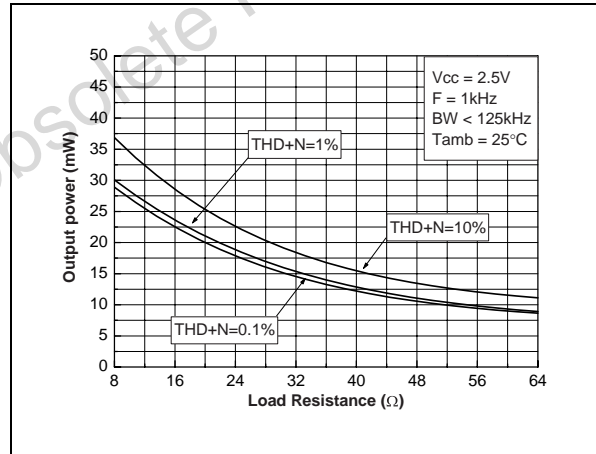


Fig. 23: Output Power vs Load Resistor

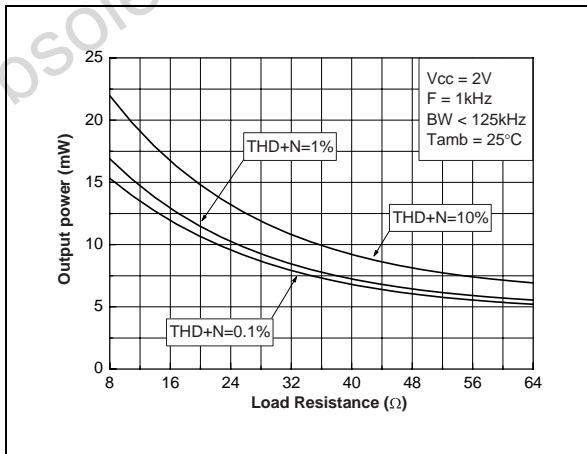


Fig. 24: Power Dissipation vs Output Power

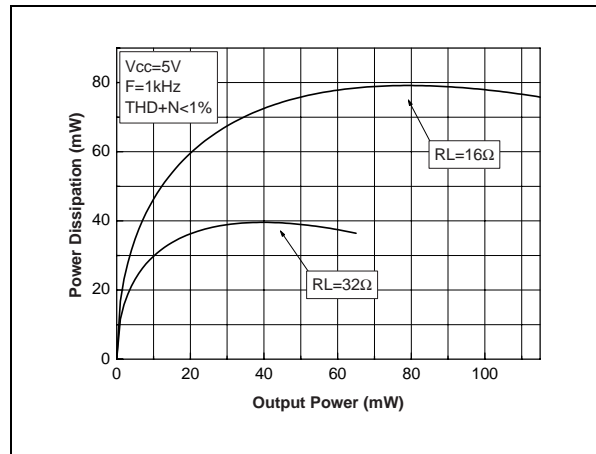


Fig. 25: Power Dissipation vs Output Power

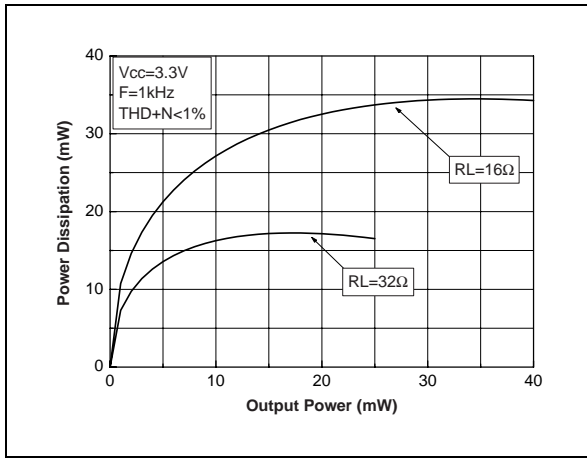


Fig. 26: Power Dissipation vs Output Power

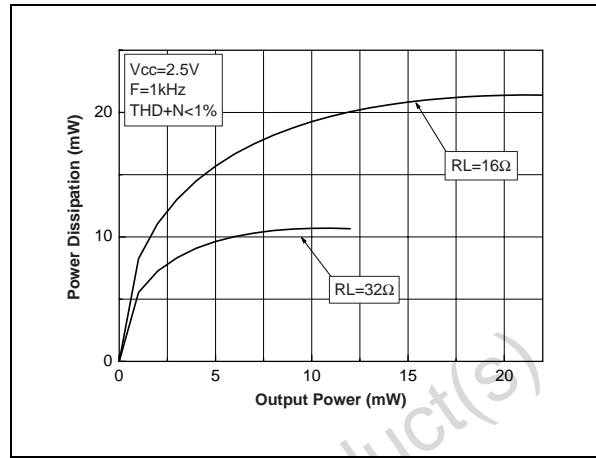


Fig. 27: Power Dissipation vs Output Power

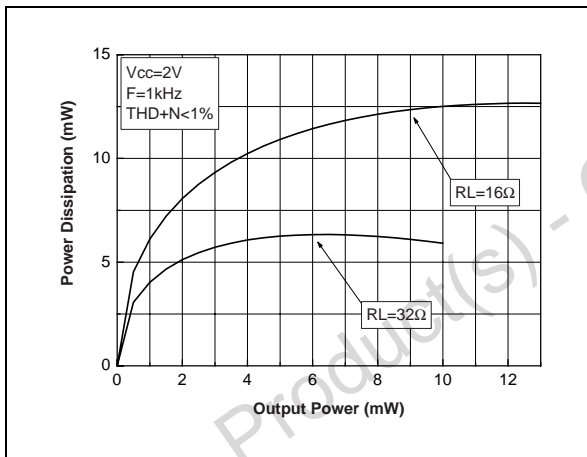


Fig. 28: Power Derating vs Ambient Temperature

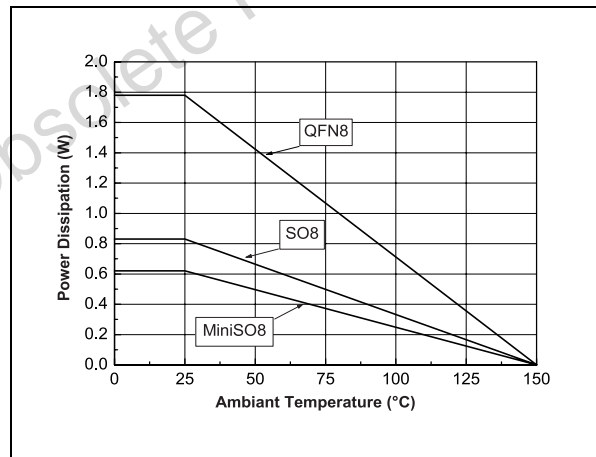


Fig. 29: Output Voltage Swing vs Power Supply Voltage

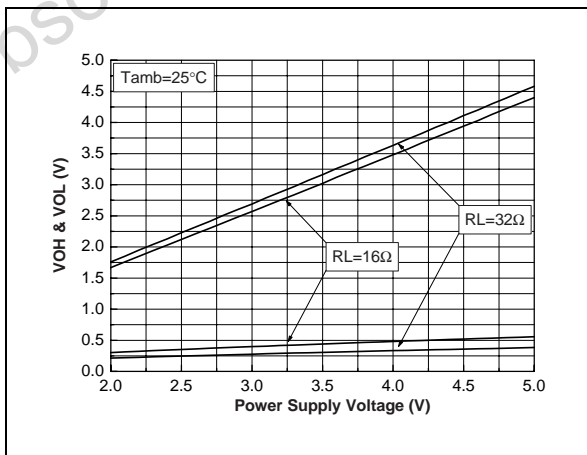


Fig. 30: Low Frequency Cut Off vs Input Capacitor for fixed gain versions.

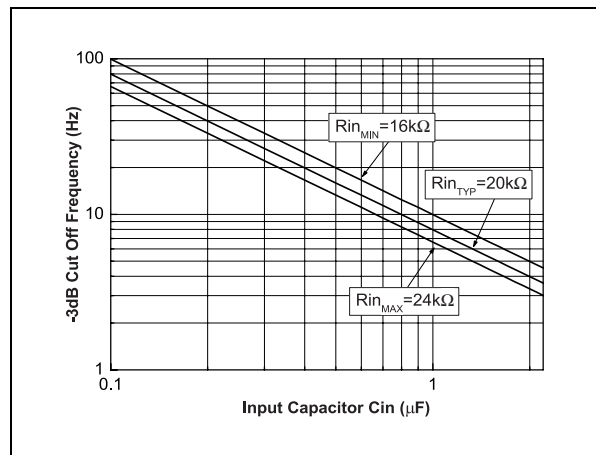


Fig. 31: THD + N vs Output Power

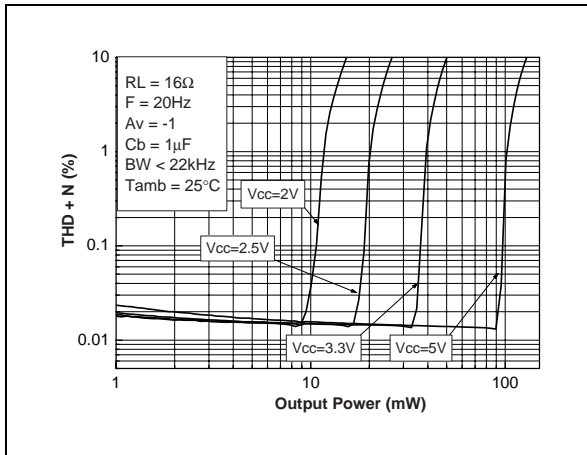


Fig. 32: THD + N vs Output Power

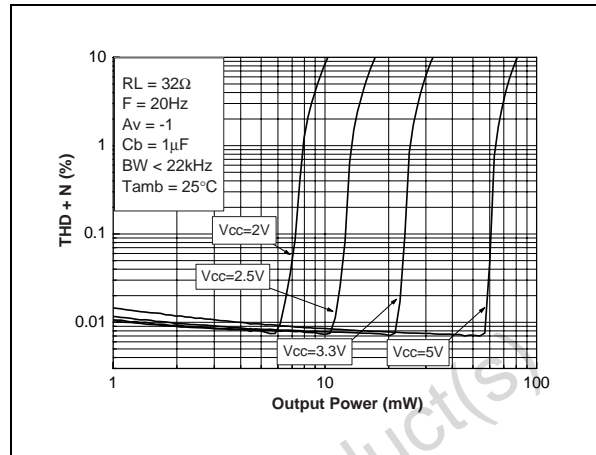


Fig. 33: THD + N vs Output Power

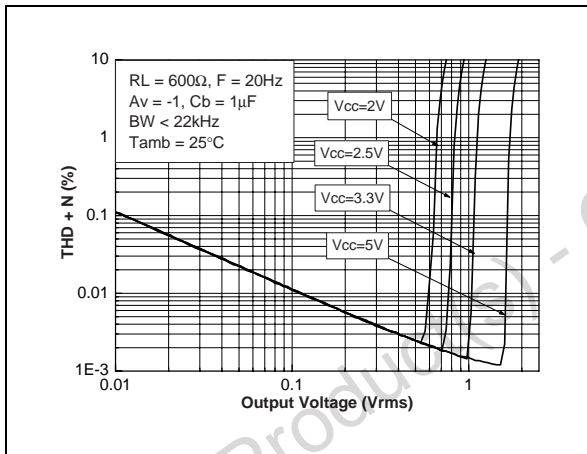


Fig. 34: THD + N vs Output Power

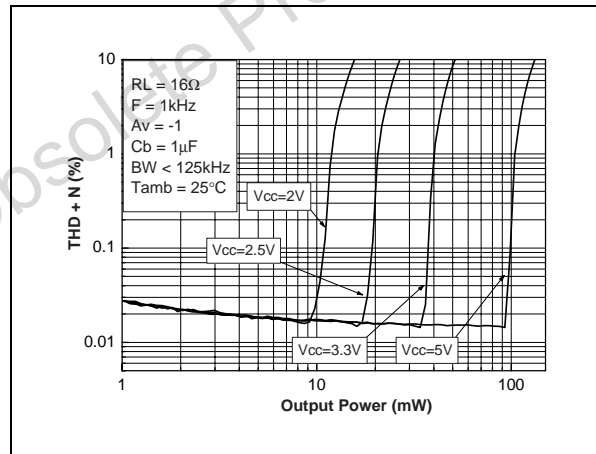


Fig. 35: THD + N vs Output Power

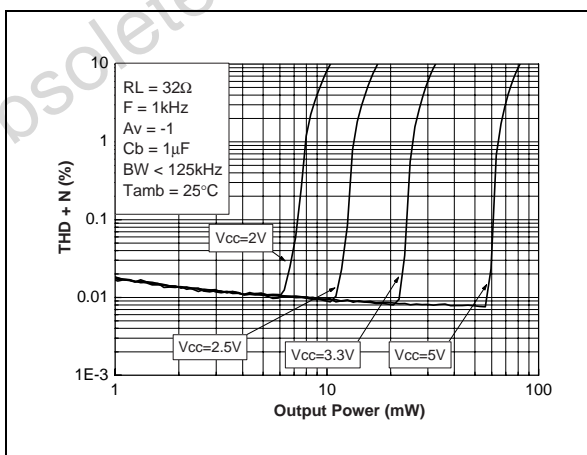


Fig. 36: THD + N vs Output Power

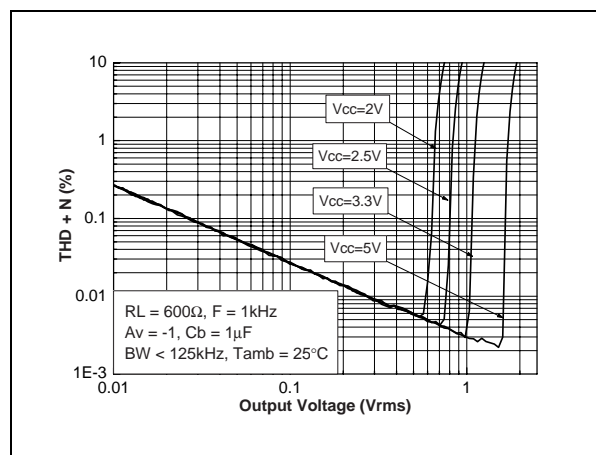


Fig. 37: THD + N vs Output Power

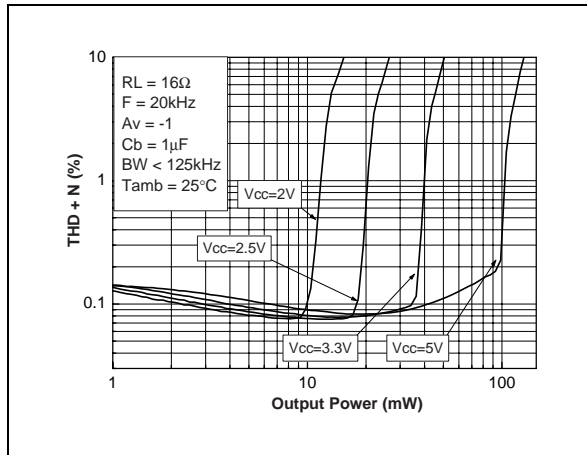


Fig. 38: THD + N vs Output Power

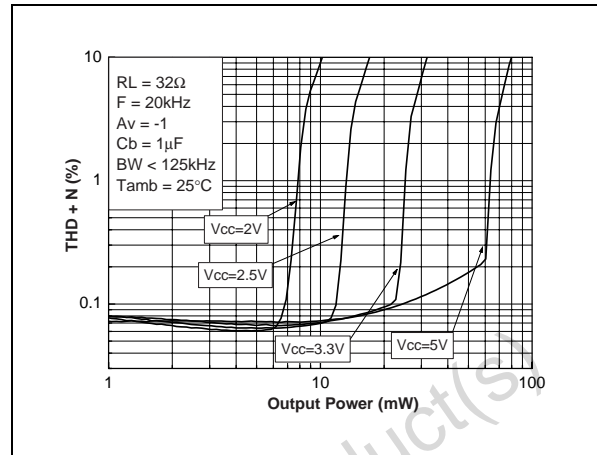


Fig. 39: THD + N vs Output Power

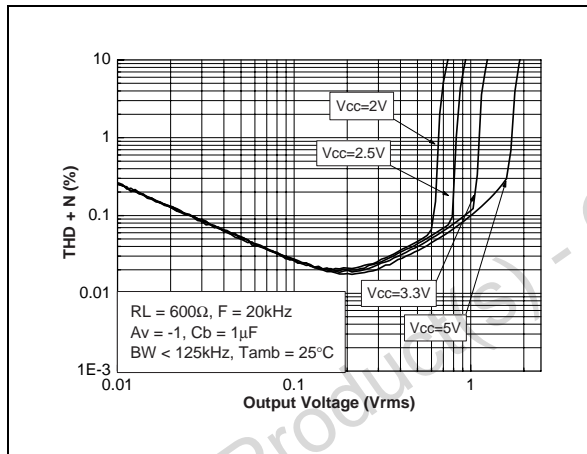


Fig. 40: THD + N vs Frequency

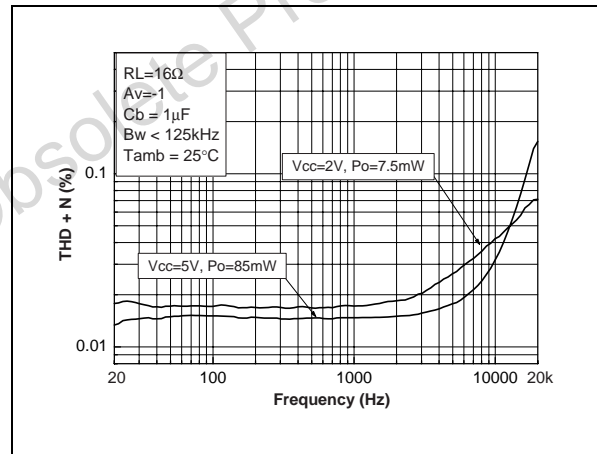


Fig. 41: THD + N vs Frequency

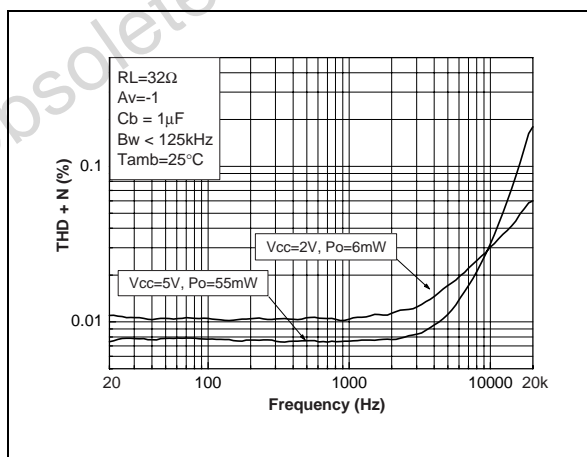


Fig. 42: THD + N vs Frequency

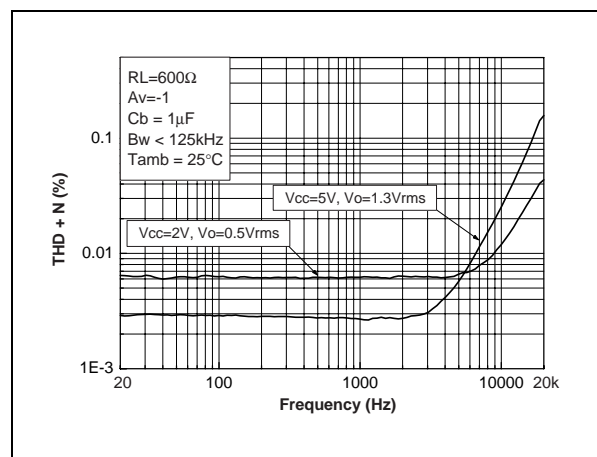




Fig. 43: Crosstalk vs Frequency

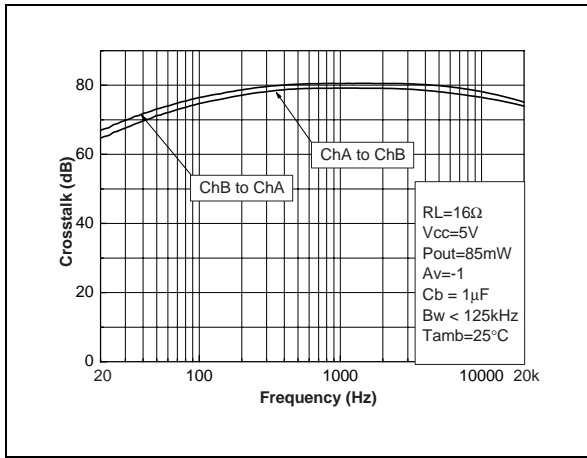


Fig. 44: Crosstalk vs Frequency

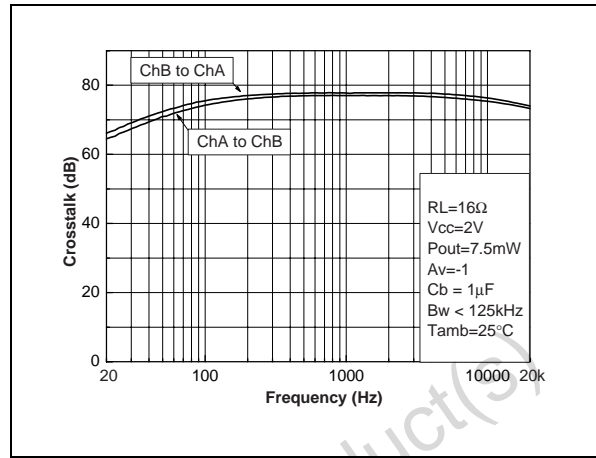


Fig. 45: Crosstalk vs Frequency

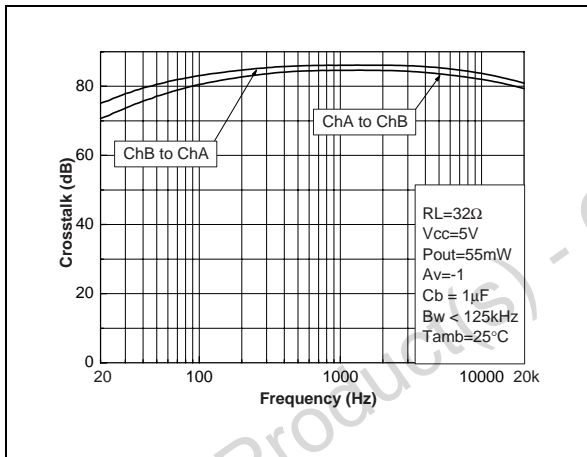


Fig. 46: Crosstalk vs Frequency

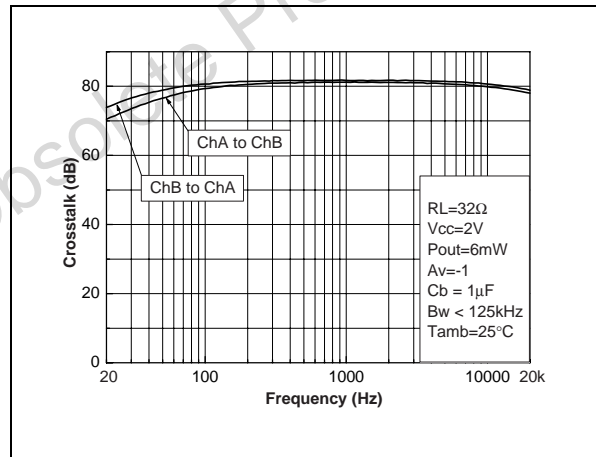


Fig. 47: Crosstalk vs Frequency

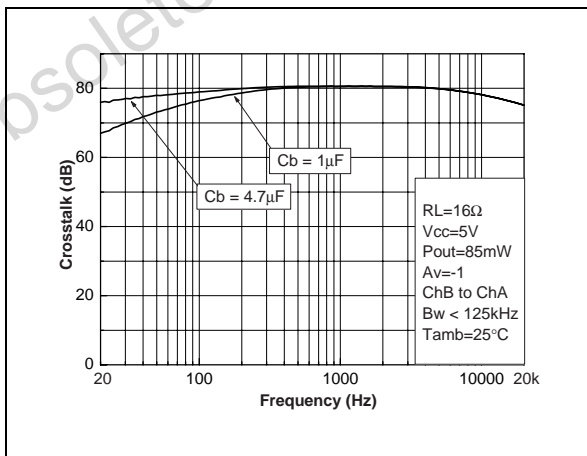
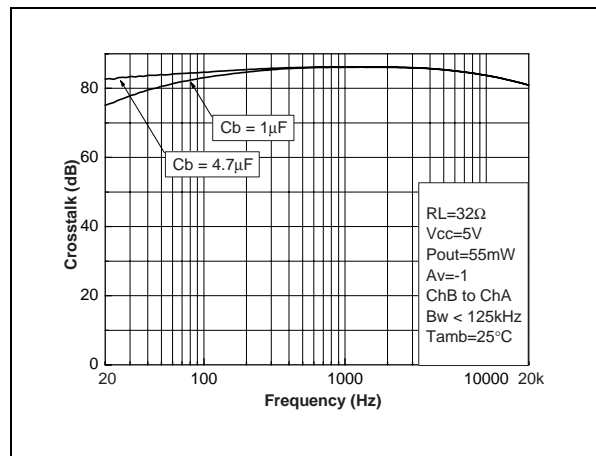
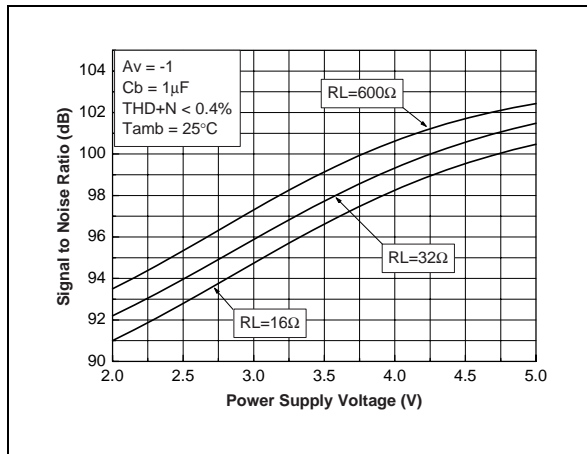


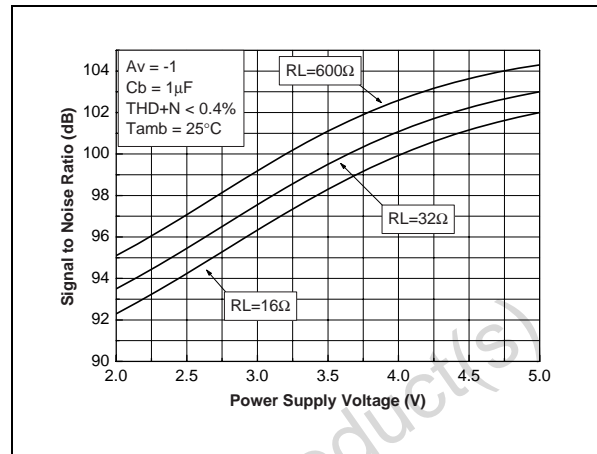
Fig. 48: Crosstalk vs Frequency



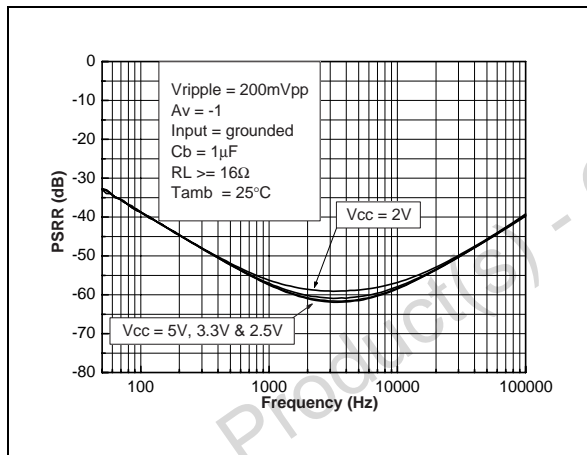
**Fig. 49: Signal to Noise Ratio vs Power Supply Voltage with Unweighted Filter (20Hz to 20kHz)**



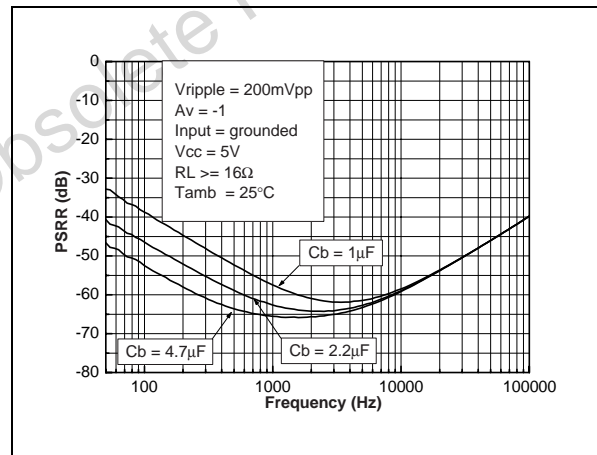
**Fig. 50: Signal to Noise Ratio vs Power Supply Voltage with Weighted Filter Type A**



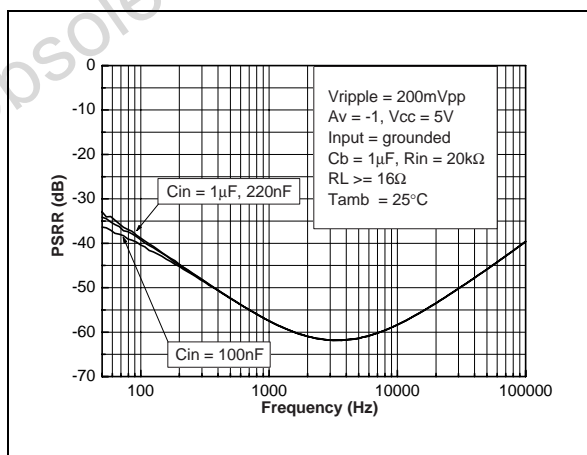
**Fig. 51: PSRR vs Power Supply Voltage**



**Fig. 52: PSRR vs Bypass Capacitor**



**Fig. 53: PSRR vs Input Capacitor**



**Fig. 54: PSRR vs Output Capacitor**

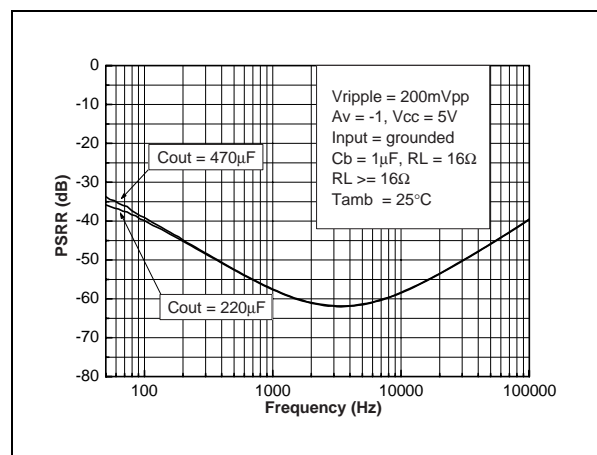


Fig. 55: PSRR vs Output Capacitor

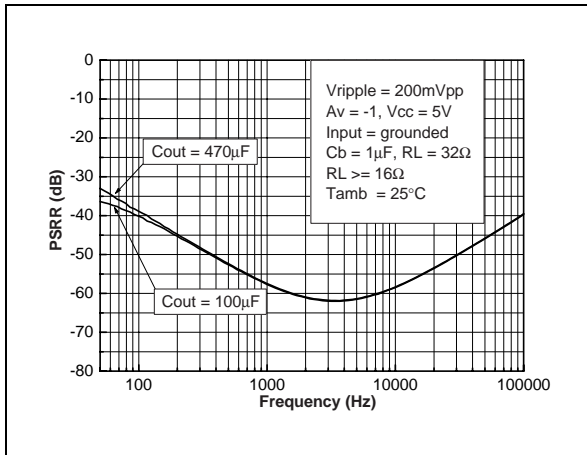
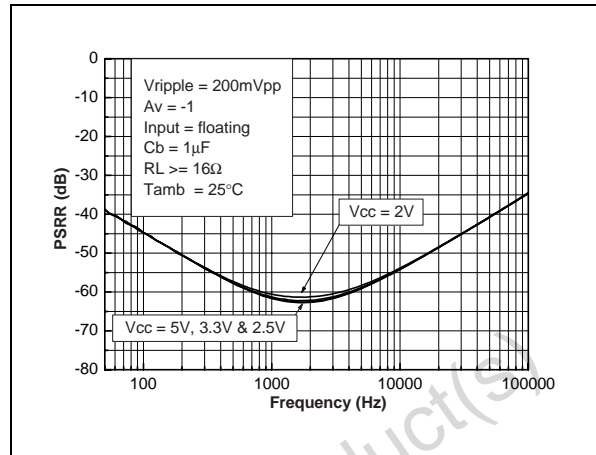


Fig. 56: PSRR vs Power Supply Voltage



Obsolete Product(s) - Obsolete Product(s)

Fig. 57: THD + N vs Output Power

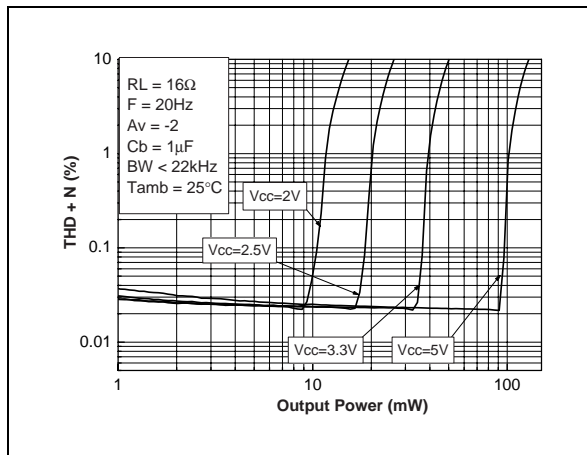


Fig. 58: THD + N vs Output Power

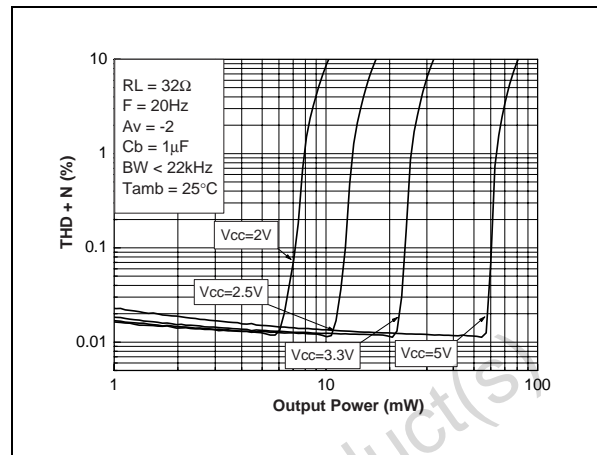


Fig. 59: THD + N vs Output Power

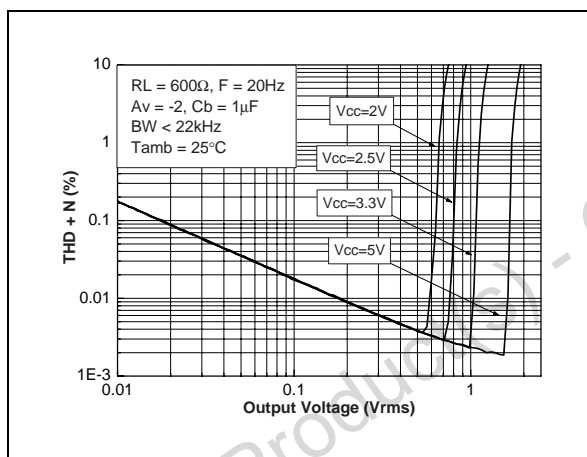


Fig. 60: THD + N vs Output Power

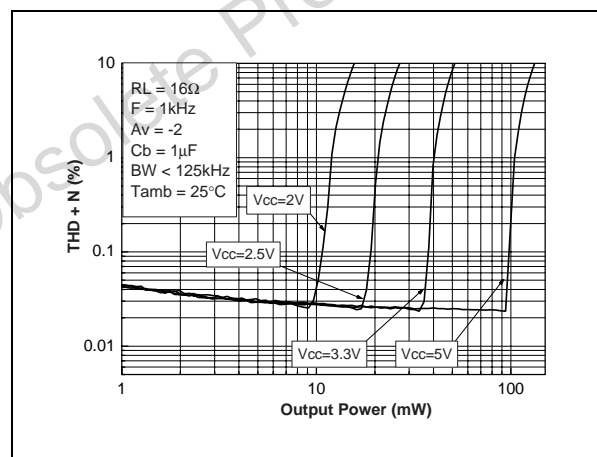


Fig. 61: THD + N vs Output Power

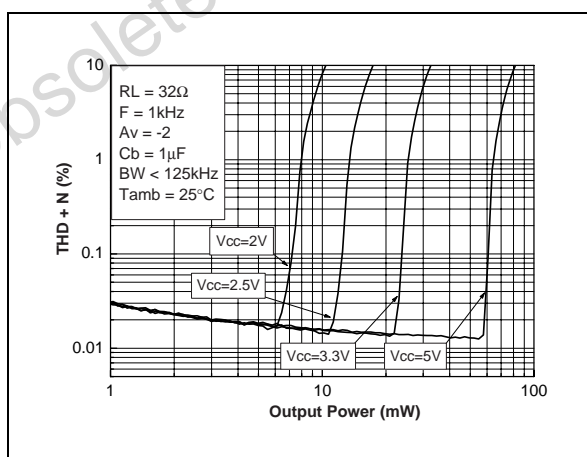


Fig. 62: THD + N vs Output Power

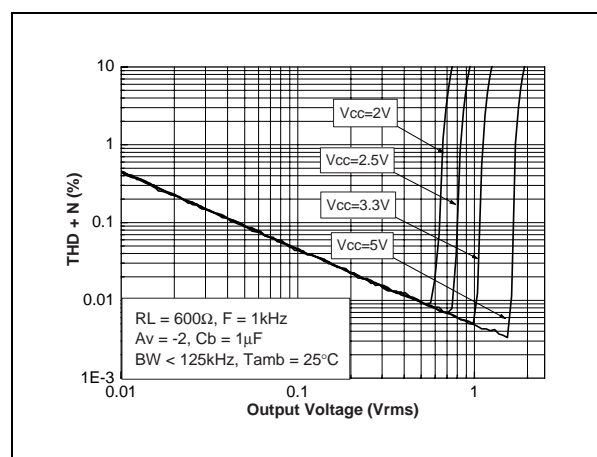


Fig. 63: THD + N vs Output Power

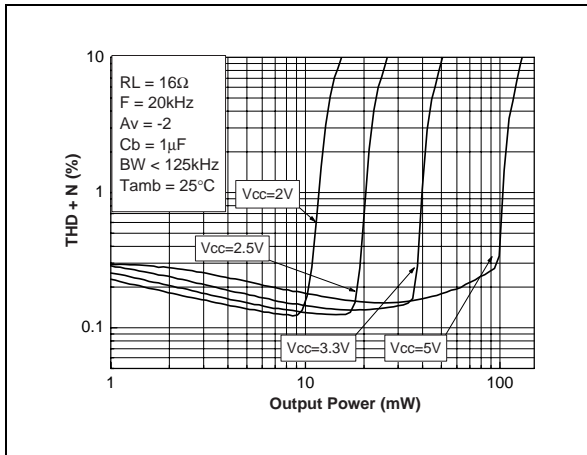


Fig. 64: THD + N vs Output Power

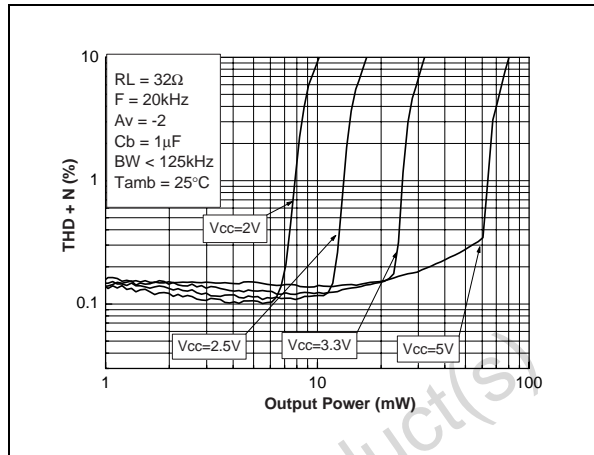


Fig. 65: THD + N vs Output Power

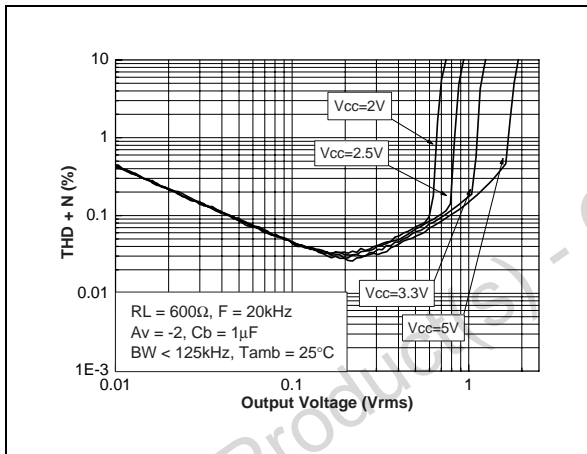


Fig. 66: THD + N vs Frequency

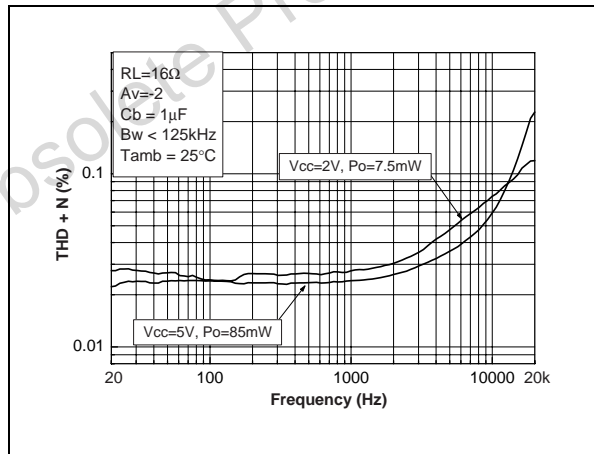


Fig. 67: THD + N vs Frequency

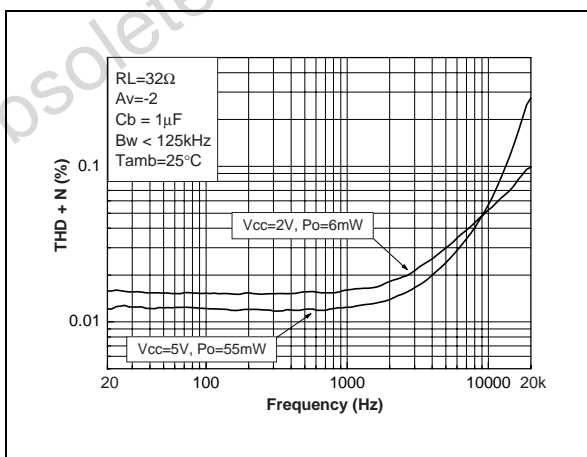


Fig. 68: THD + N vs Frequency

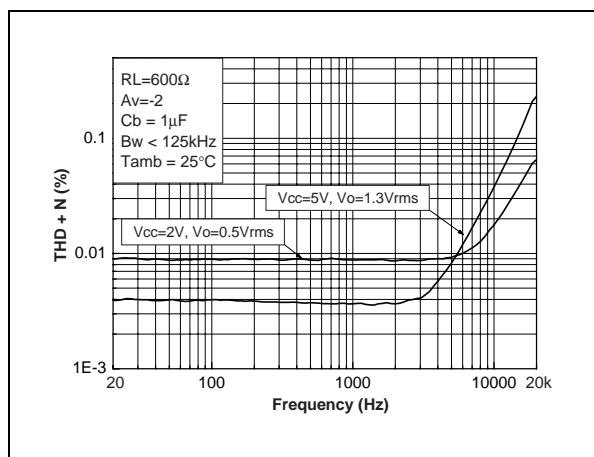


Fig. 69: Crosstalk vs Frequency

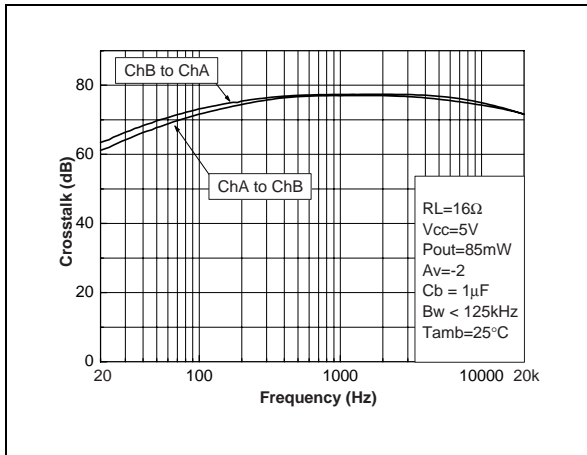


Fig. 70: Crosstalk vs Frequency

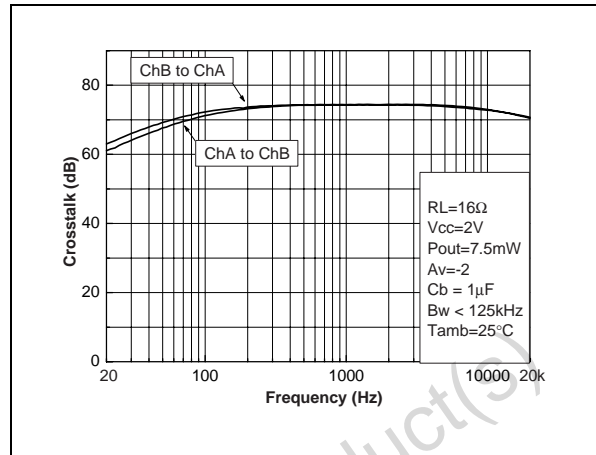


Fig. 71: Crosstalk vs Frequency

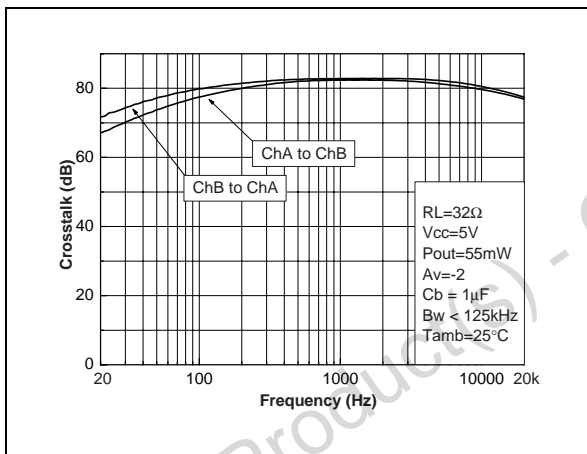


Fig. 72: Crosstalk vs Frequency

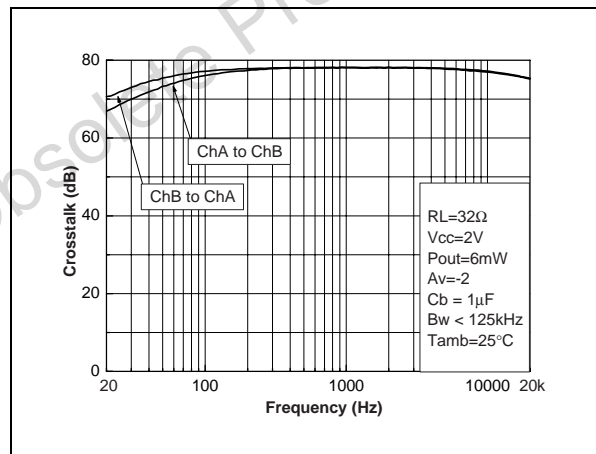


Fig. 73: Signal to Noise Ratio vs Power Supply Voltage with Unweighted Filter (20Hz to 20kHz)

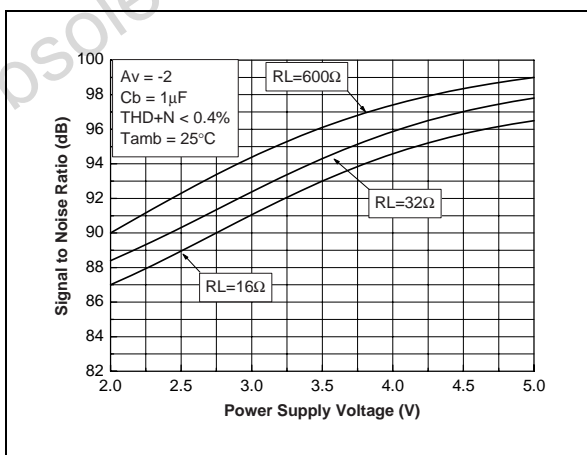


Fig. 74: Signal to Noise Ratio vs Power Supply Voltage with Weighted Filter Type A

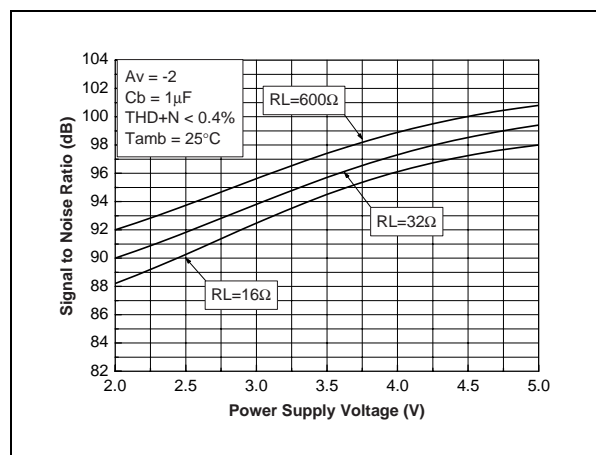


Fig. 75: PSRR vs Power Supply Voltage

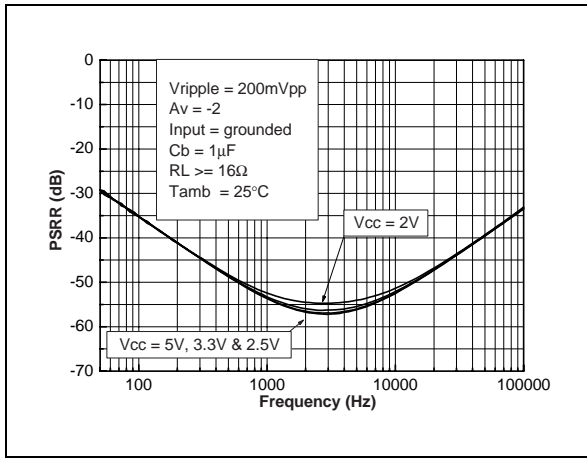


Fig. 76: PSRR vs Bypass Capacitor

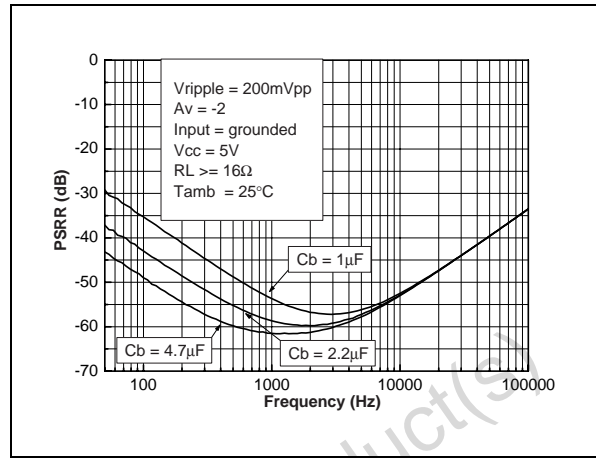


Fig. 77: PSRR vs Input Capacitor

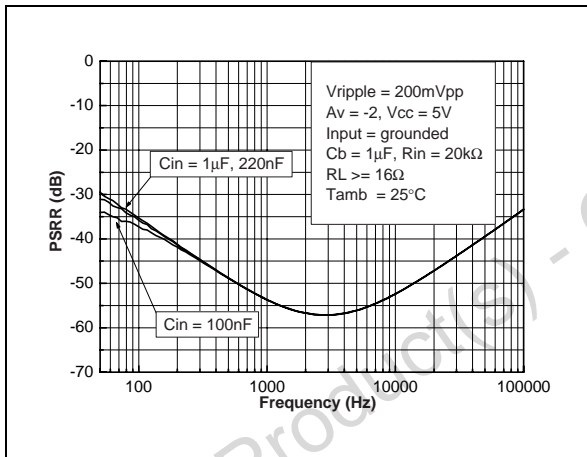


Fig. 78: PSRR vs Output Capacitor

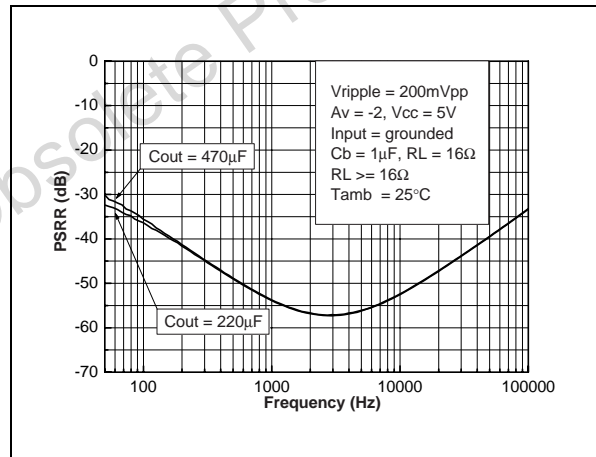


Fig. 79: PSRR vs Output Capacitor

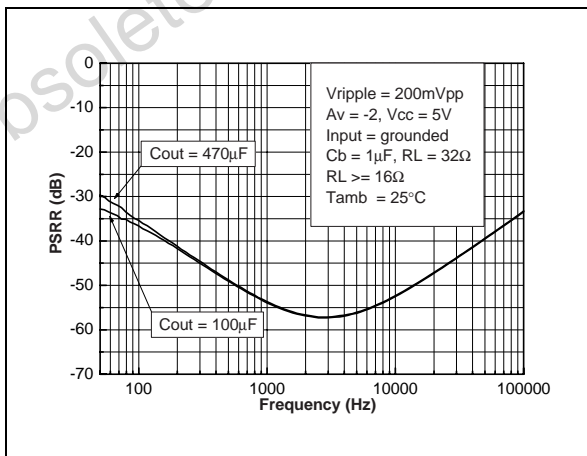


Fig. 80: THD + N vs Output Power

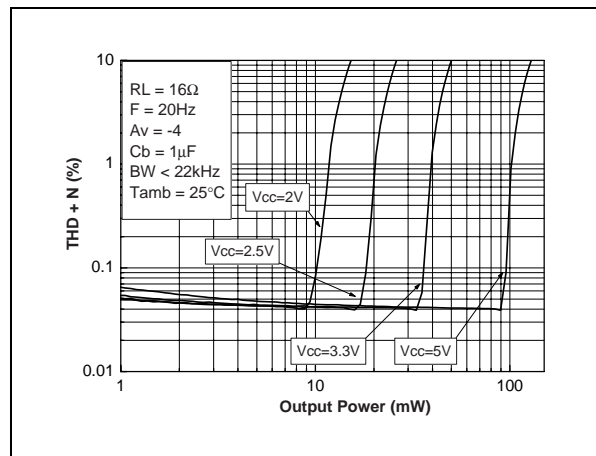


Fig. 81: THD + N vs Output Power

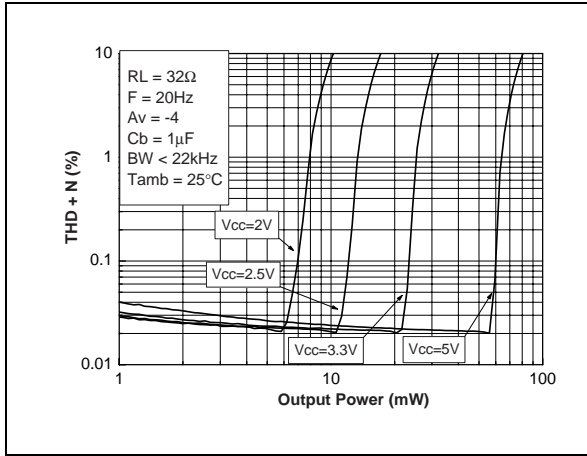


Fig. 82: THD + N vs Output Power

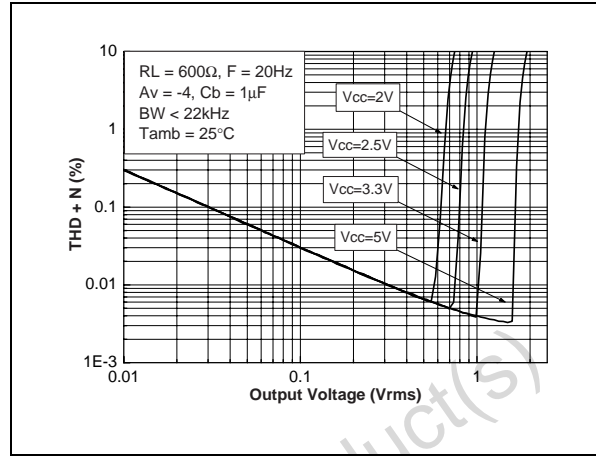


Fig. 83: THD + N vs Output Power

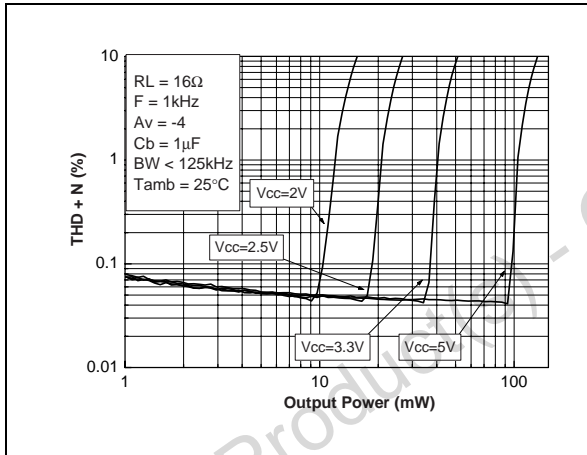


Fig. 84: THD + N vs Output Power

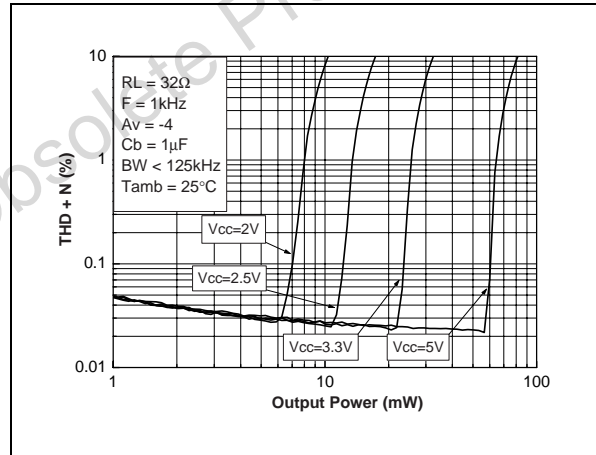


Fig. 85: THD + N vs Output Power

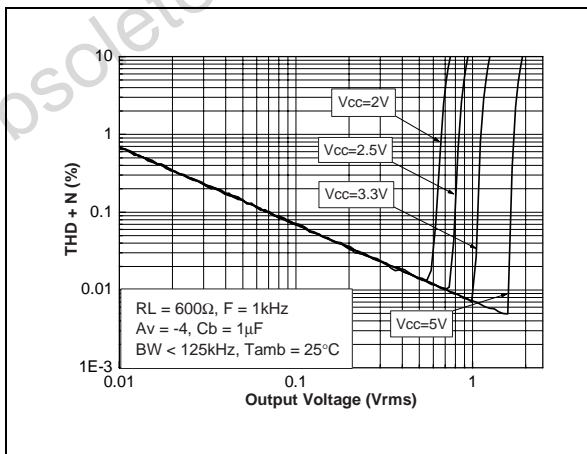


Fig. 86: THD + N vs Output Power

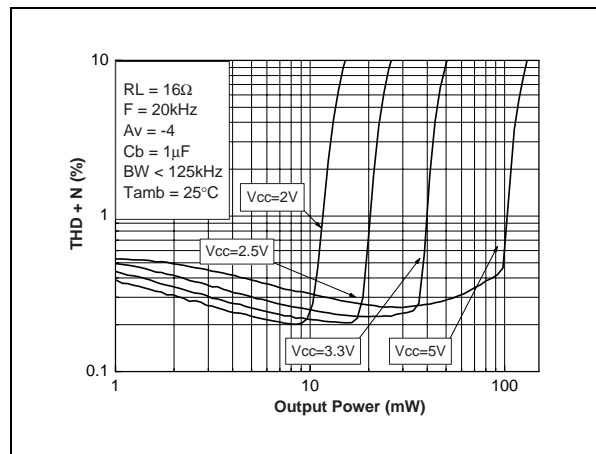




Fig. 87: THD + N vs Output Power

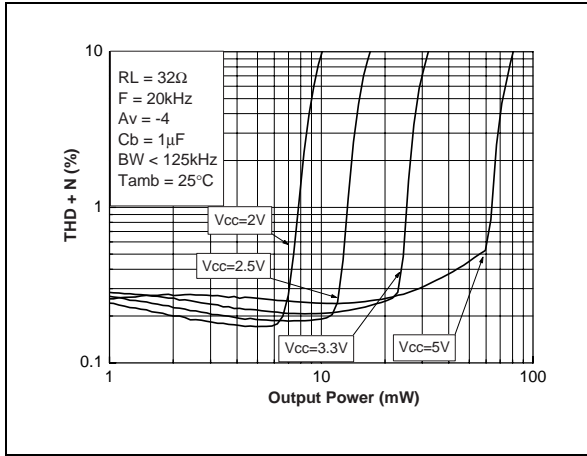


Fig. 88: THD + N vs Output Power

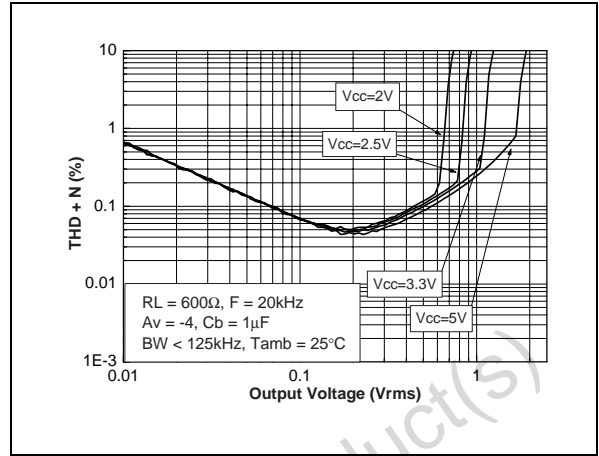


Fig. 89: THD + N vs Frequency

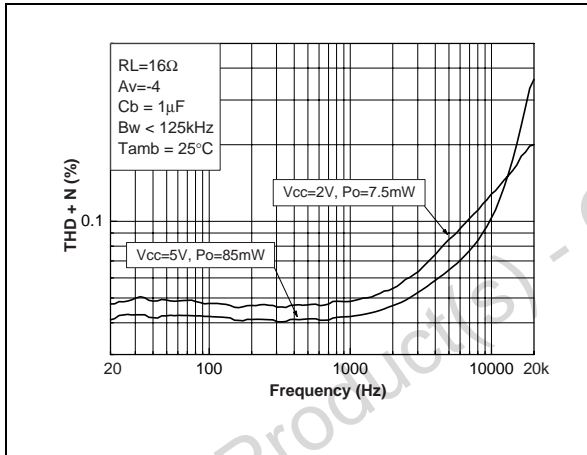


Fig. 90: THD + N vs Frequency

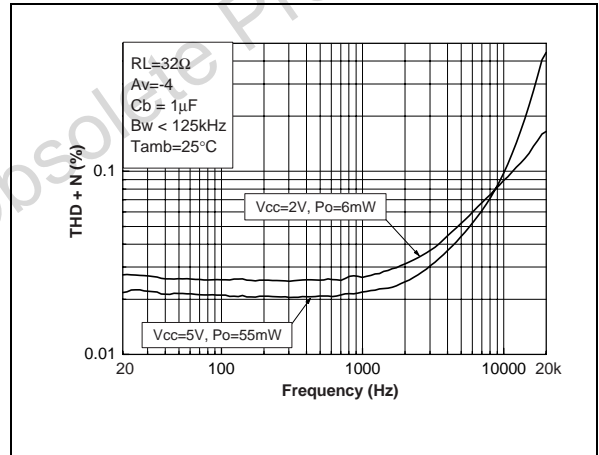


Fig. 91: THD + N vs Frequency

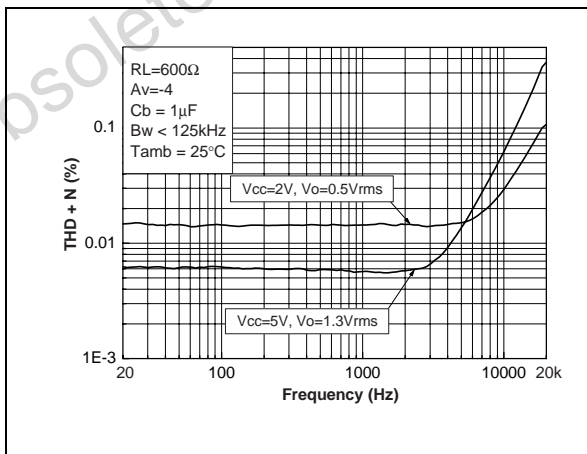


Fig. 92: Crosstalk vs Frequency

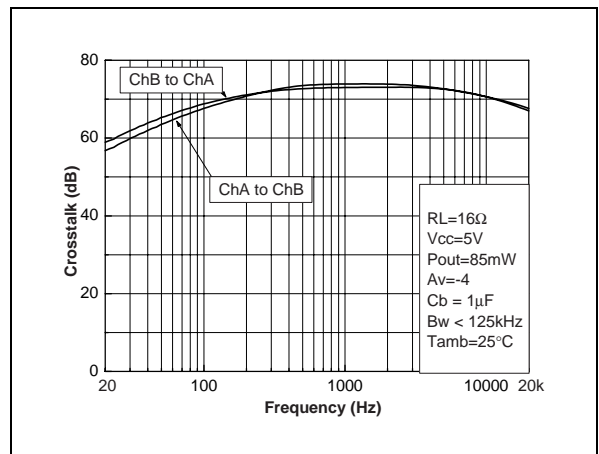


Fig. 93: Crosstalk vs Frequency

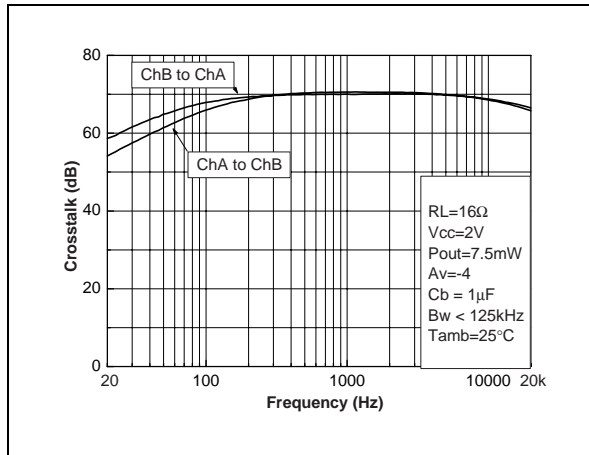


Fig. 94: Crosstalk vs Frequency

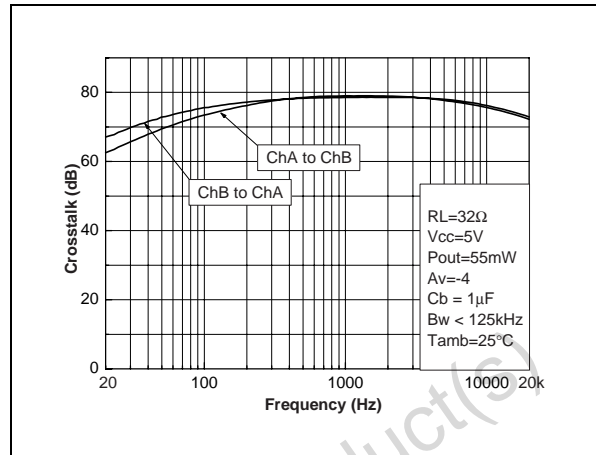


Fig. 95: Crosstalk vs Frequency

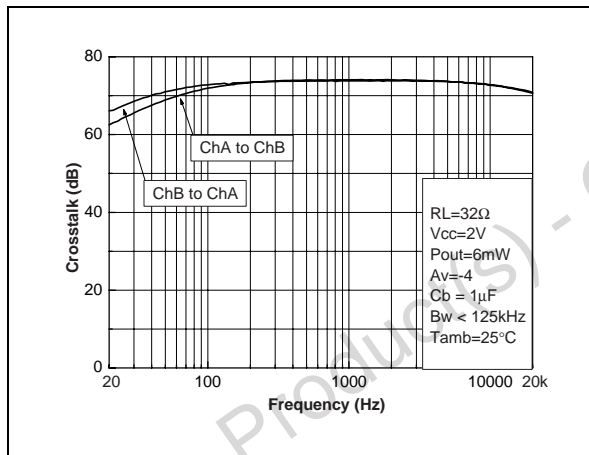


Fig. 96: Signal to Noise Ratio vs Power Supply Voltage with Unweighted Filter (20Hz to 20kHz)

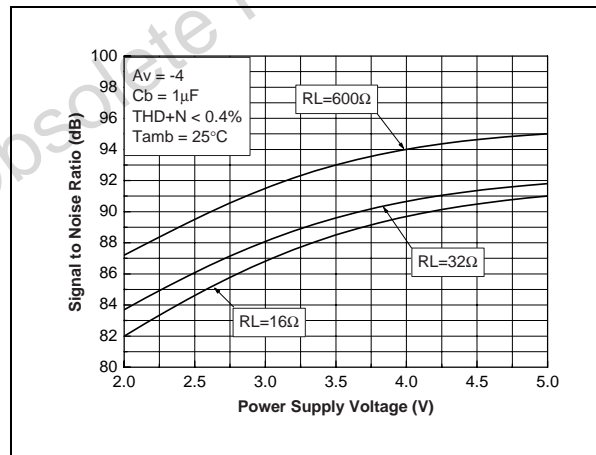


Fig. 97: Signal to Noise Ratio vs Power Supply Voltage with Weighted Filter Type A

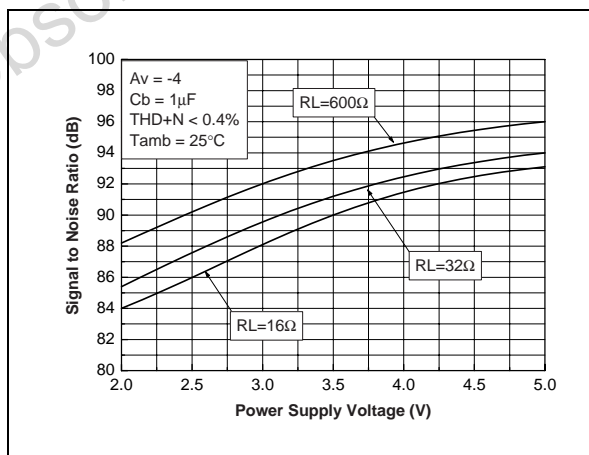


Fig. 98: PSRR vs Power Supply Voltage

