

LOW VOLTAGE VIDEO AMPLIFIER WITH LPF

■GENERAL DESCRIPTION

The **NJM2571A** is a Low Voltage Video Amplifier contained LPF circuit. Internal 75 Ω driver is easy to connect TV monitor directly.

The **NJM2571A** features low power and small package, and is suitable for low power design on downsizing of DSC and DVC.

■PACKAGE OUTLINE

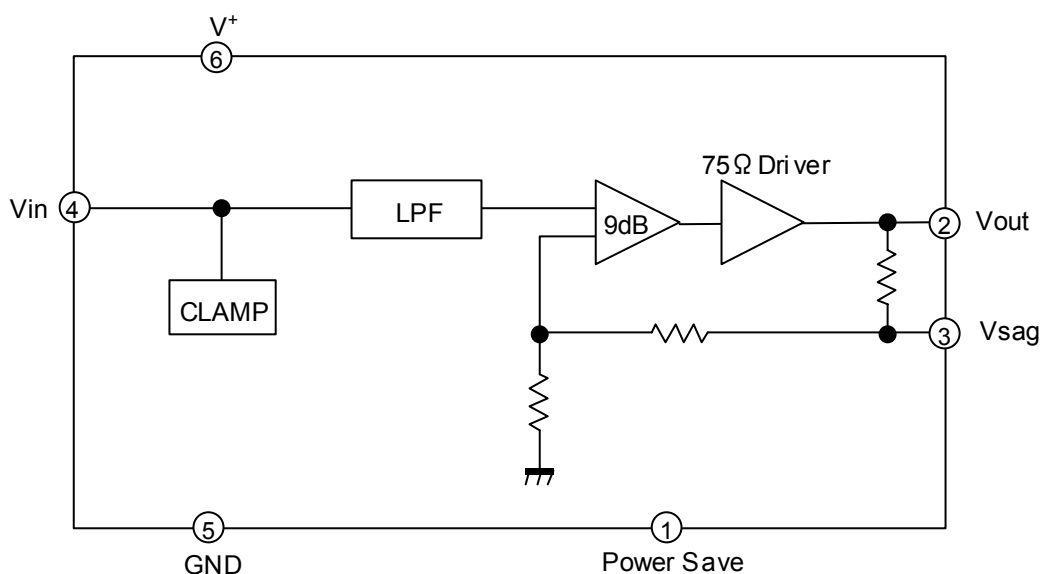


NJM2571AF1

■FEATURES

- Operating Voltage 2.8 to 5.5V
- 9dB amplifier
- Internal LPF -33dB at 19MHz typ.
- Internal 75 Ω Driver Circuit (2-system drive)
- Power Save Circuit
- Bipolar Technology
- Package Outline MTP6

■BLOCK DIAGRAM



NJM2571A

■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	7.0	V
Power Dissipation	P _D	200	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

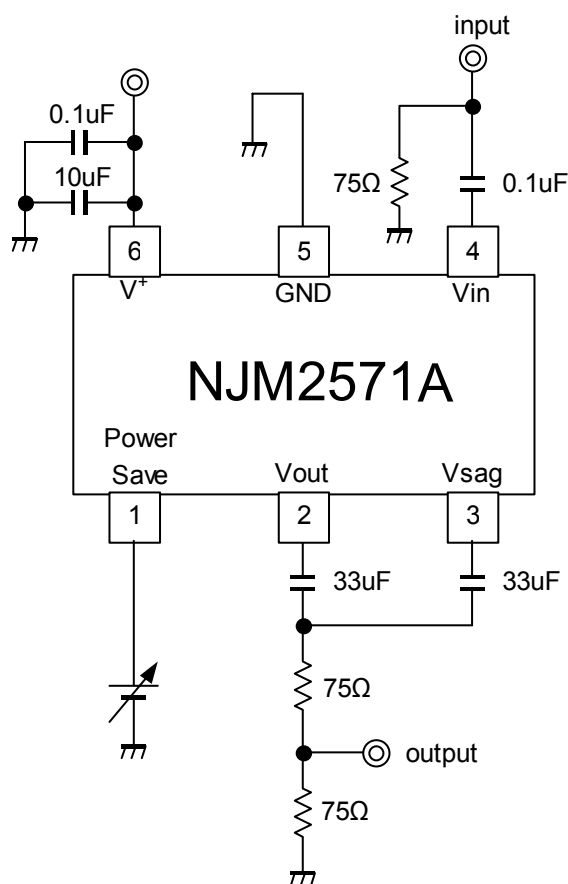
■ELECTRICAL CHARACTERISTICS (V⁺=3.0V, R_L=150Ω, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current	I _{CC}	No Signal	-	8.0	12.0	mA
Operating Current at Power Save	I _{save}	Power Save Mode	-	30	50	uA
Maximum Output Voltage Swing	V _{om}	f=100kHz, THD=1%	2.2	2.5	-	Vp-p
Voltage Gain	G _v	Vin=100kHz, 0.7Vp-p, Input Sine Signal	8.5	9.0	9.5	dB
Low Pass Filter Characteristic	G _{fy} 4.5M	Vin=4.5MHz/100kHz, 0.7Vp-p	-0.6	-0.1	0.4	dB
	G _{fy} 19M	Vin=19MHz/100kHz, 0.7Vp-p	-	-33	-23	
Differential Gain	DG	Vin=0.7Vp-p, Input 10step Video Signal	-	0.5	-	%
Differential Phase	DP	Vin=0.7Vp-p, Input 10step Video Signal	-	0.5	-	deg
S/N Ratio	SN _v	Vin=0.7Vp-p, R _L =75Ω 100% White Video Signal	-	+60	-	dB
2nd. Distortion	H _v	Vin=0.7Vp-p, 3.58MHz, Sine Video Signal, R _L =75Ω	-	-50	-	dB
SW Change Voltage High Level	V _{th} PH	Active	1.8	-	V ⁺	V
SW Change Voltage Low Level	V _{th} PL	Non-active	0	-	0.3	

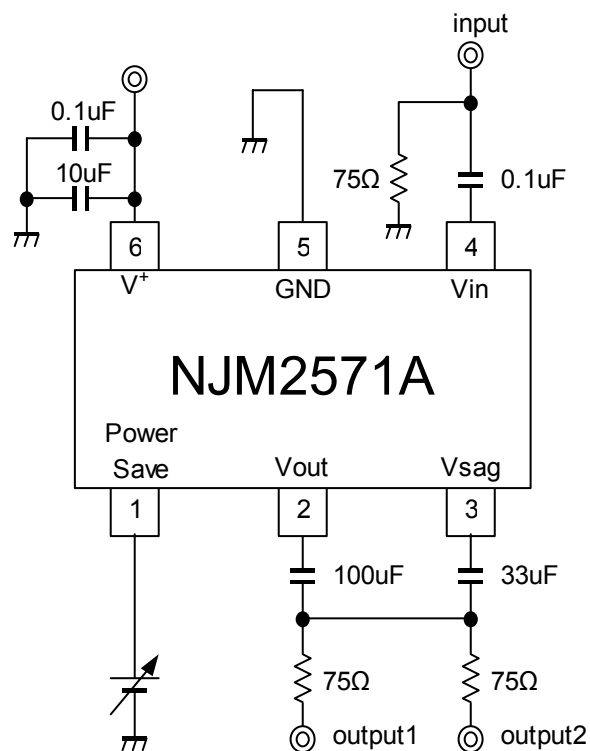
■CONTROL TERMINAL

PARAMETER	STATUS	NOTE
Power Save	H	Power Save: OFF
	L	Power Save: ON
	OPEN	Power Save: ON

■TEST CIRCUIT



■APPLICATION CIRCUIT

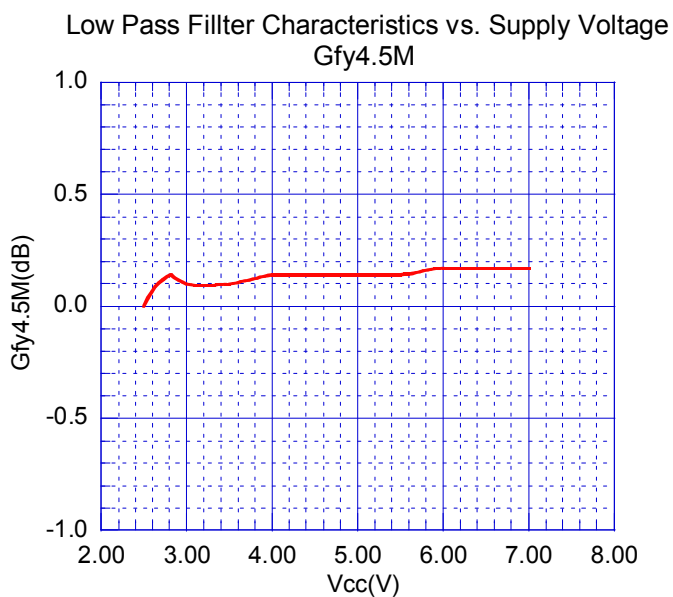
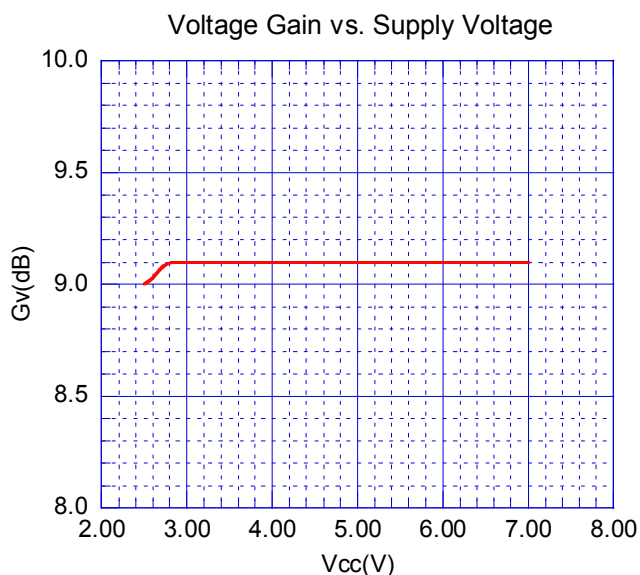
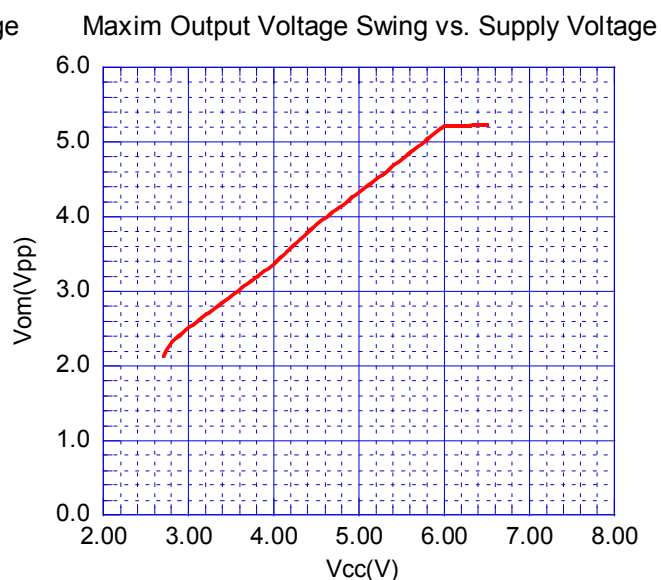
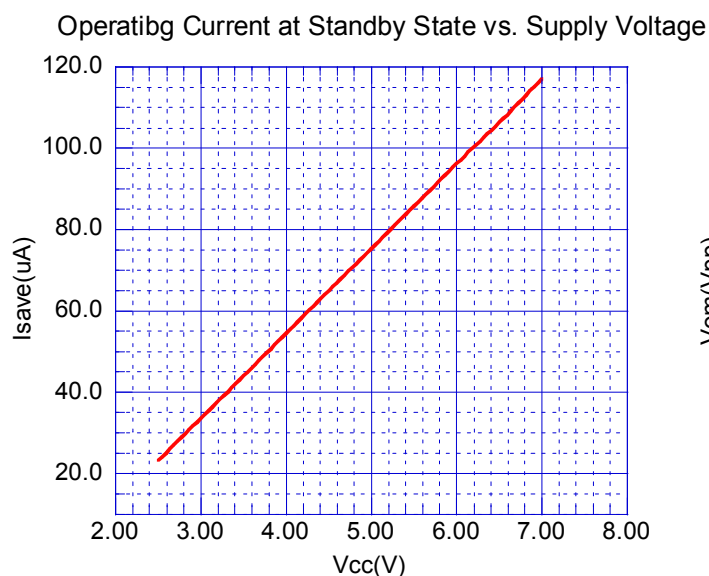
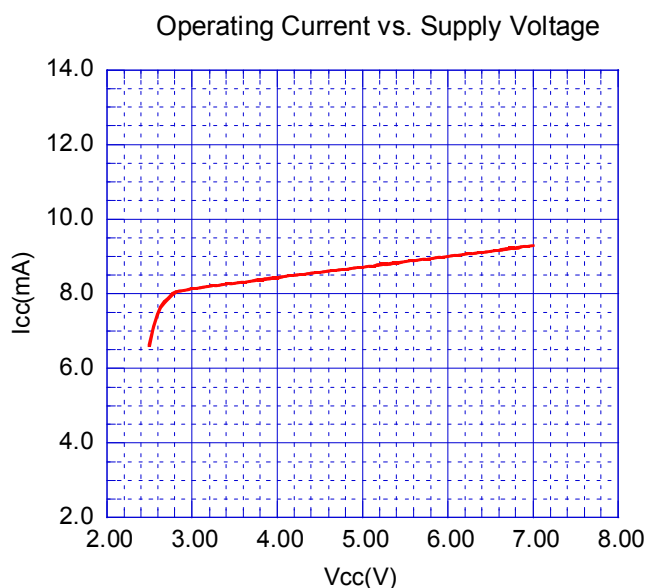
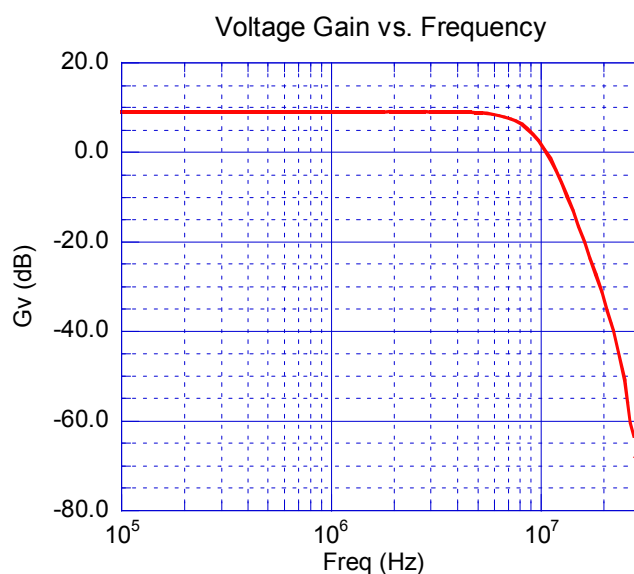


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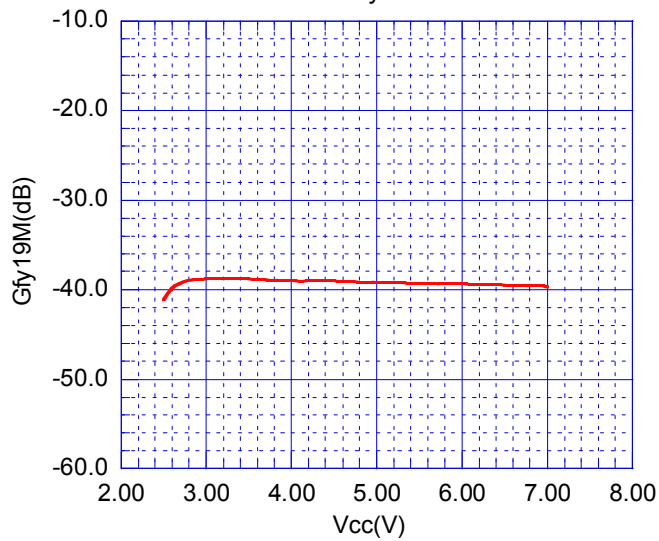
■TERMINAL FUNCTION

PIN No.	PIN NAME	DC VOLTAGE	EQUIVALENT CIRCUIT
1	Power Save	-	
2	Vout	0.26V	
3	Vsag	-	
4	Vin	1.10V	
5	GND	-	
6	V+	3V	

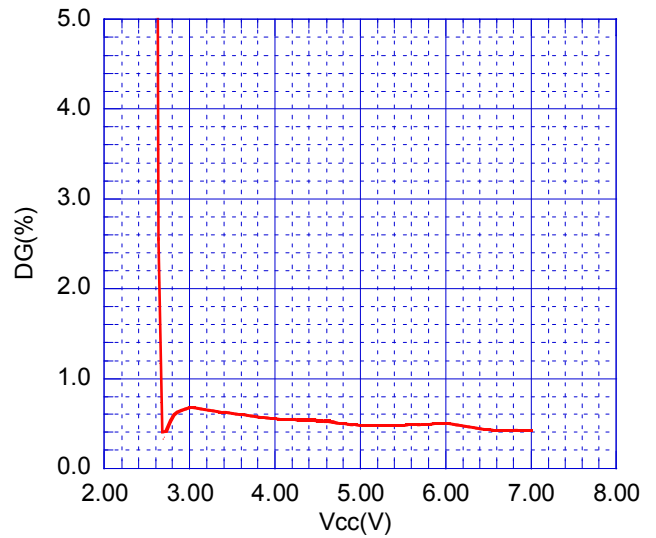
TYPICAL CHARACTERISTICS



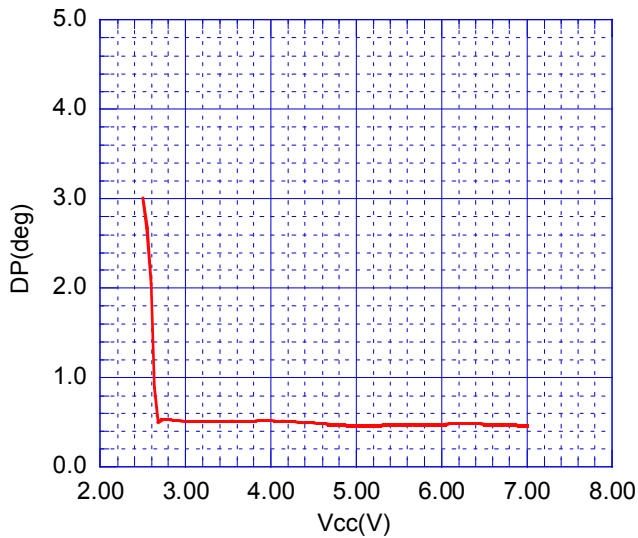
Low Pass Filter Characteristics vs. Supply Voltage
Gfy19M



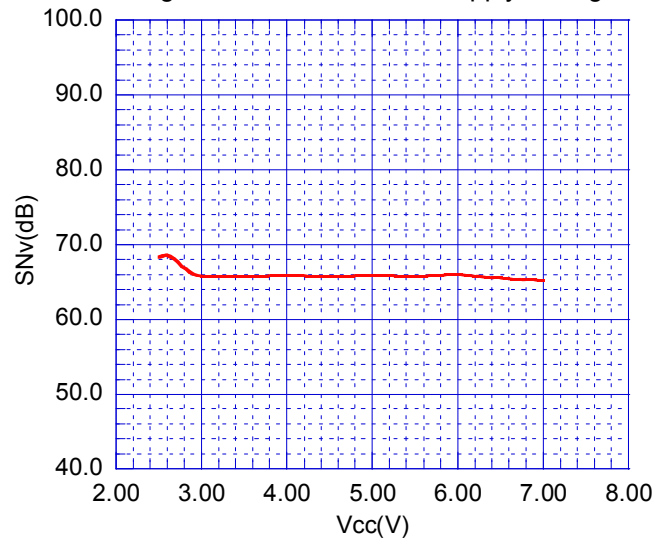
Differential Gain vs. Supply Voltage



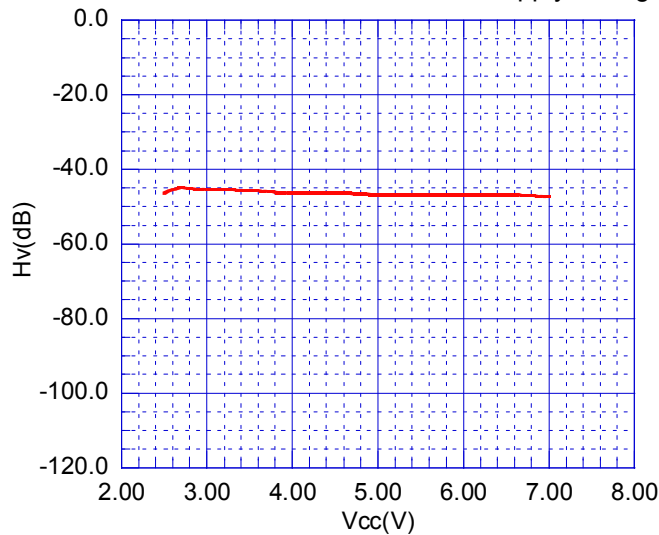
Differential Phase vs. Supply Voltage



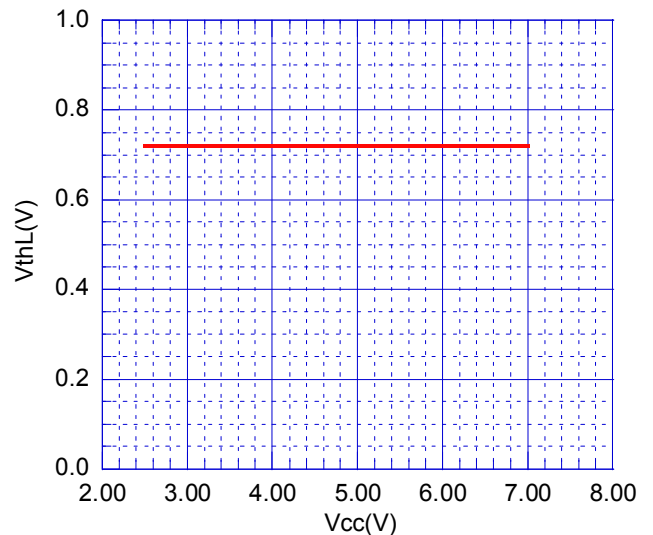
Signal to Noise Ratio vs. Supply Voltage



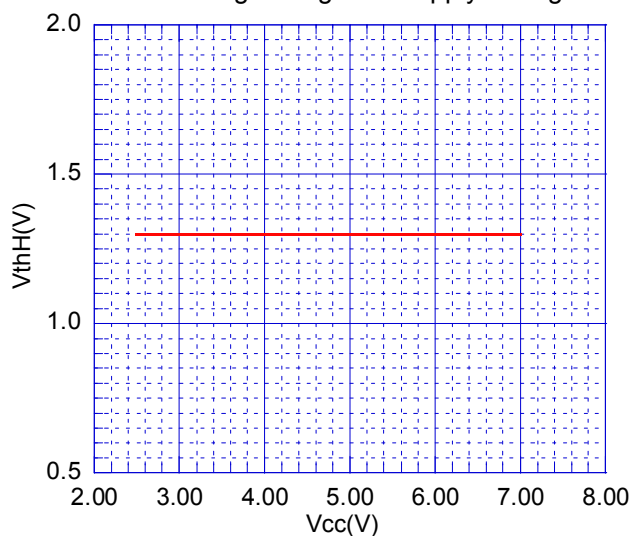
Second Harmonic Distortion vs. Supply Voltage



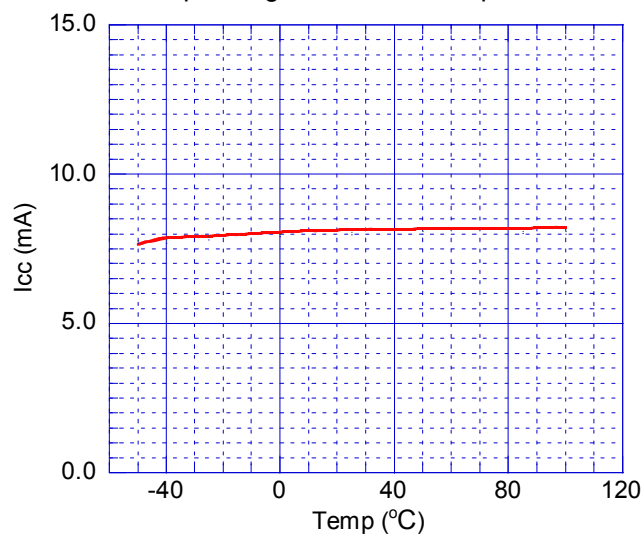
Switching Voltage vs. Supply Voltage



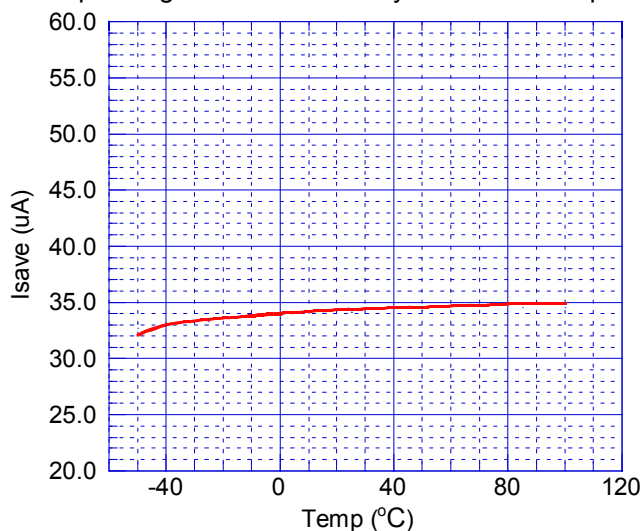
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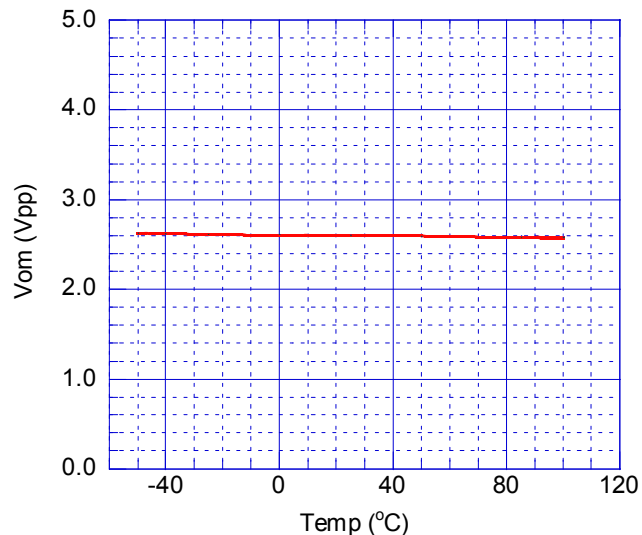
Operating Current vs. Temperature



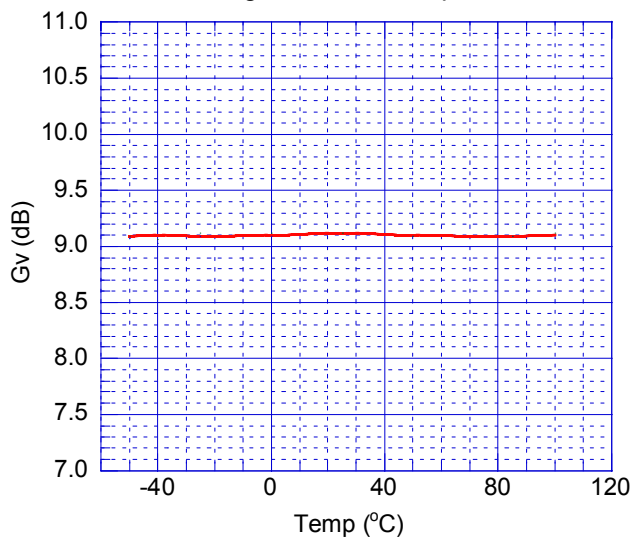
Operating Current at Standby State vs. Temperature



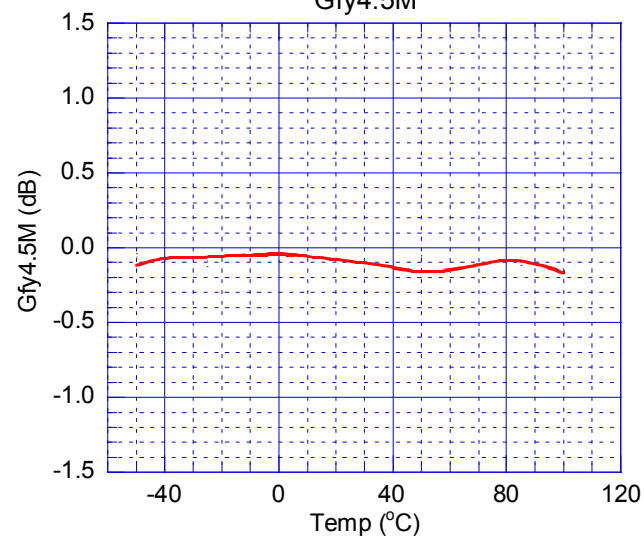
Maximum Output Voltage Swing vs. Temperature



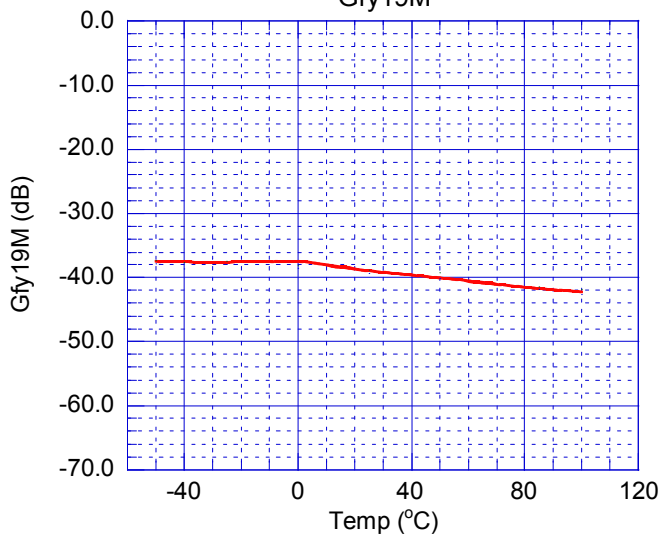
Voltage Gain vs. Temperature



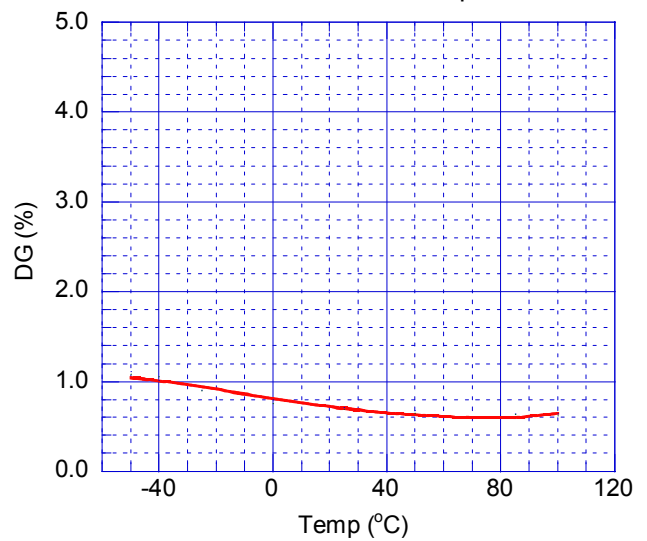
Low Pass Filter Characteristic vs. Temperature
Gfy4.5M



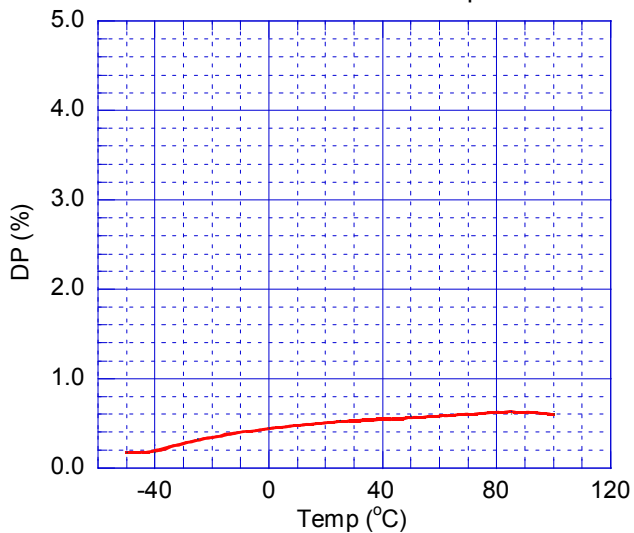
Low Pass Filter Characteristic vs. Temperature
Gfy19M



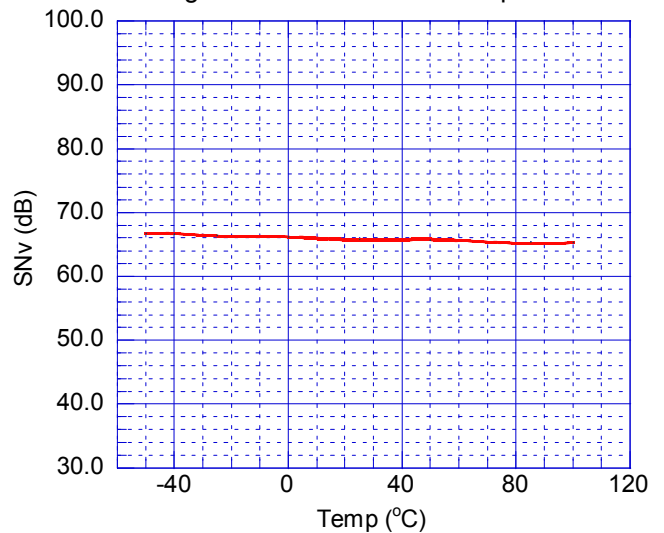
Differential Gain vs. Temperature



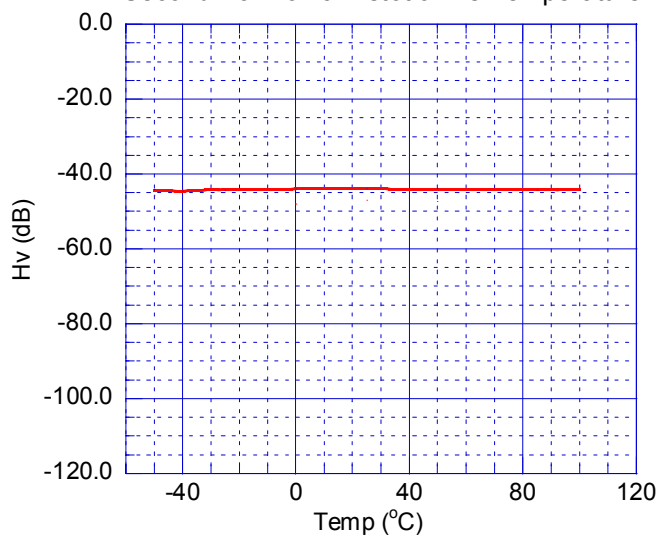
Differential Phase vs. Temperature



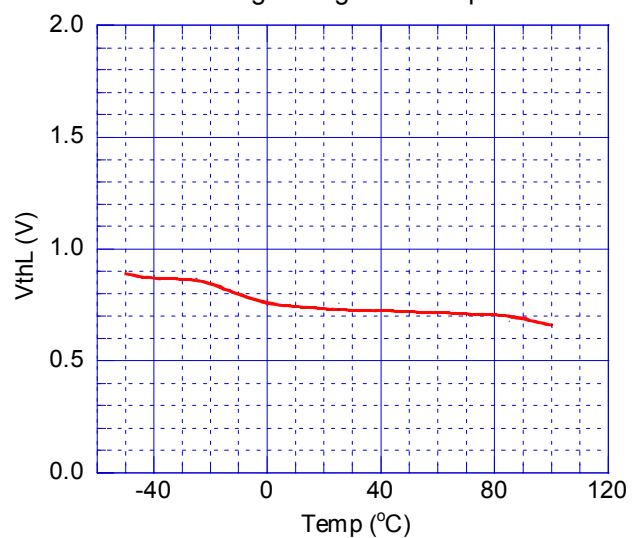
Signal to Noise Ratio vs. Temperature

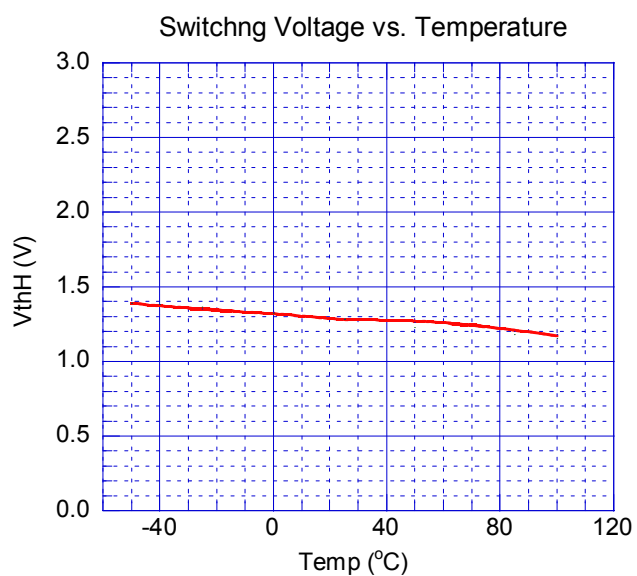


Second Harmonic Distortion vs. Temperature



Switching Voltage vs. Temperature





[CAUTION]

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