WIDE BAND 3-INPUT 1-OUTPUT 3-CIRCUIT VIDEO AMPLIFIER

■GENERAL DESCRIPTION

The **NJM2585** is a wide band 3-input 1-output 3-circuit video amplifier. It is suitable for Y, Pb, and Pr signal because frequency range is 50MHz.

The **NJM2585** is suitable for AV receiver, STB, and other high quality AV systems.

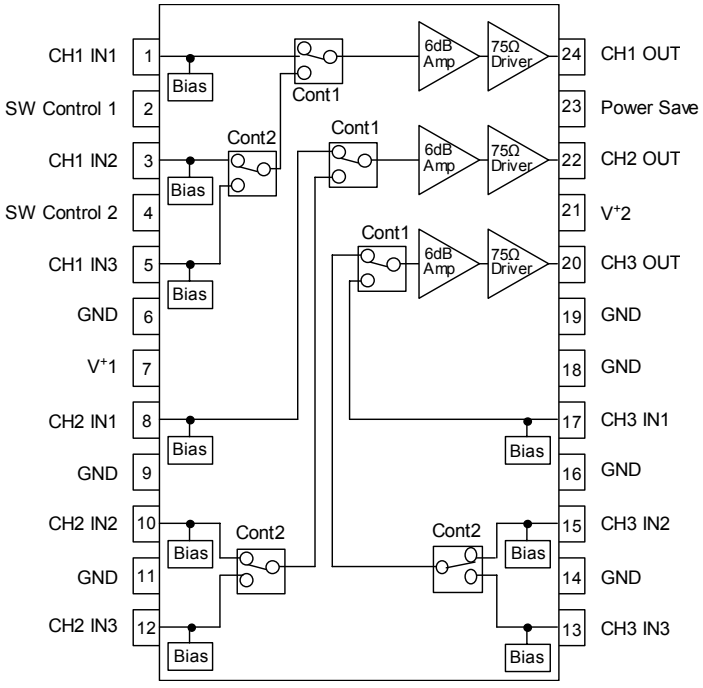
■PACKAGE OUTLINE

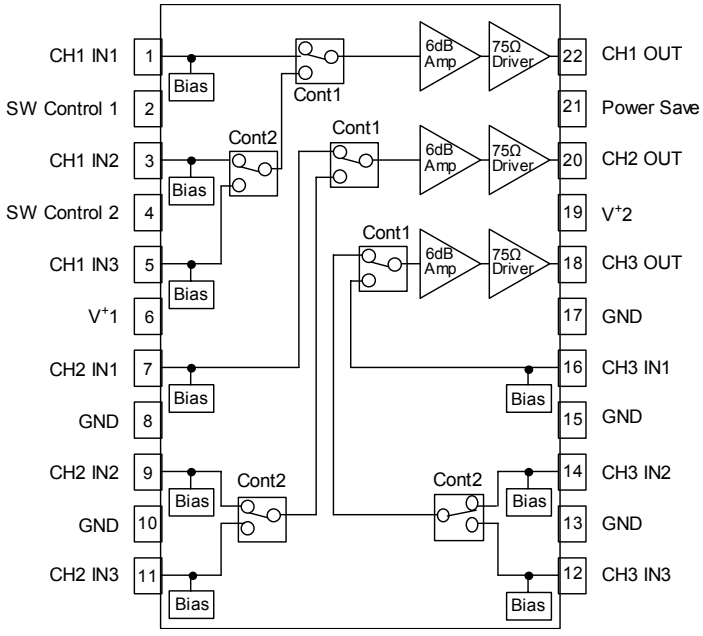
NJM2585M **NJM2585L**

■ FEATURES

- Operating Voltage 4.5 to 9.0V
- Wide frequency range 0dB at 50MHz typ.
- Internal 3 input-1output 3-circuit video switch
- Internal 6dB Amplifier
- Internal 75Ω Driver Circuit
- Power Save Circuit
- Bipolar Technology
- Package Outline DMP24, SDIP22

■BLOCK DIAGRAM





■**ABSOLUTE MAXIMUM RATINGS** (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	12.0	V
Power Dissipation	P_D	500 (DMP24) 700 (SDIP22)	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

■**ELECTRICAL CHARACTERISTICS** (Ta=25°C,V^+1=5V, V^+2=5V, R_L=150Ω)

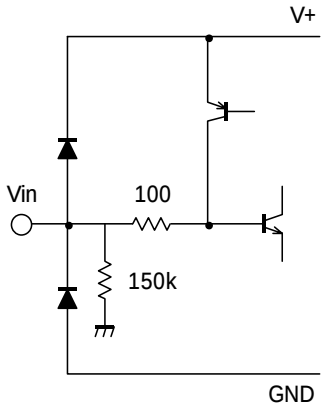
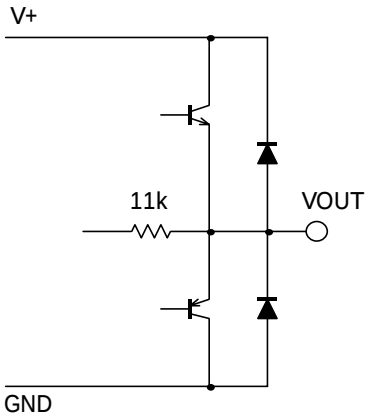
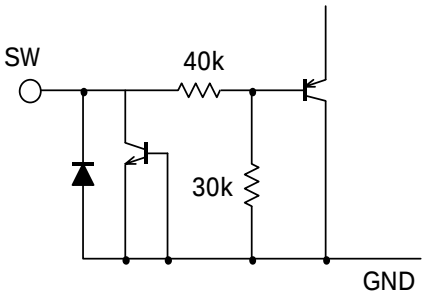
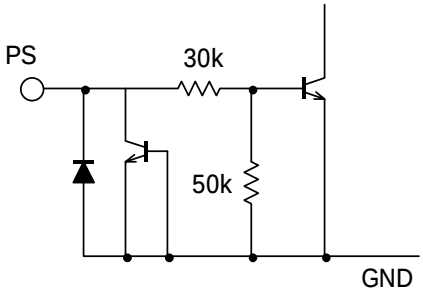
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current	I_{CC}	No Signal	-	23.0	35.0	mA
Operating Current at Power Save	Isave	No Signal, Power Save Mode	-	0.7	1.2	mA
Maximum Output Voltage Swing	Vom	Vin=100kHz, Sine Signal, THD=1%	2.4	3.0	-	Vp-p
Voltage Gain	Gv	Vin=1MHz, 1.0Vp-p, Sine Signal	5.8	6.2	6.6	dB
Gain Difference Between Channel	ΔGvI	Vin=1MHz, 1.0Vp-p,Sine Signal (IN1, IN2, IN3)	-0.2	0	+0.2	dB
Gain Difference Between Block	ΔGvB	Vin=1MHz, 1.0Vp-p,Sine Signal (CH1, CH2, CH3)	-0.2	0	+0.2	dB
Band Width	f		-	50	-	MHz
Frequency Characteristic	Gf	Vin=50MHz/1MHz, 1.0Vp-p, Sine signal	-	0	-	dB
Channel Cross talk 1	CTI1	Vin=4.43MHz, 1.0Vp-p, Sine signal	-	-60	-50	dB
Channel Cross talk 2	CTI2	Vin=50MHz, 1.0Vp-p, Sine signal	-	-40	-	dB
Block Cross talk 1	CTB1	Vin=4.43MHz, 1.0Vp-p, Sine signal	-	-60	-50	dB
Block Cross talk 2	CTB2	Vin=50MHz, 1.0Vp-p, Sine signal	-	-40	-	dB
Differential Gain	DG	Vin=1.0Vp-p, 10step Video Signal	-	0.3	-	%
Differential Phase	DP	Vin=1.0Vp-p, 10step Video Signal	-	0.3	-	deg
S/N Ratio	SNv	Vin=1.0Vp-p, 100KHz to 6MHz 100% White Video Signal	-	65	-	dB
Power Save SW Change Voltage High Level	VthPH	PS	2.0	-	V^+	V
Power Save SW Change Voltage Low Level	VthPL	PS	0	-	0.6	V
Input Select SW Change Voltage High Level	VthSH	SW1, SW2	2.0	-	V^+	V
Input Select SW Change Voltage Low Level	VthSL	SW1, SW2	0	-	0.6	V

■CONTROL TERMINAL

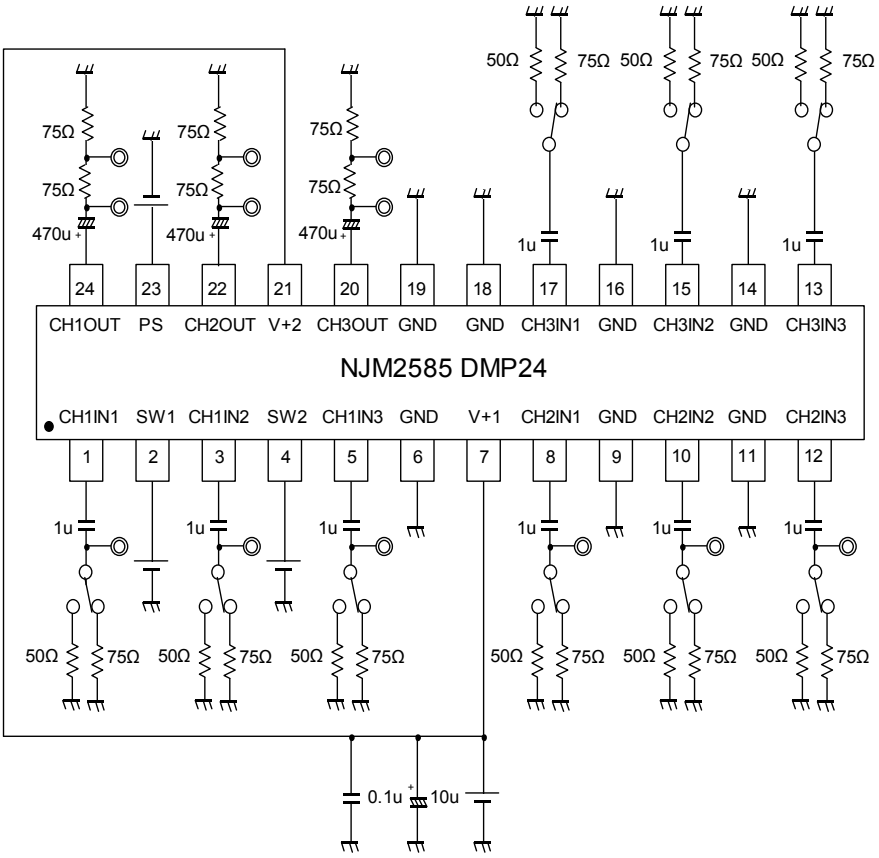
PARAMETER	STATUS	NOTE
Power Save	H	Power Save: OFF
	L	Power Save: ON
	OPEN	Power Save: ON

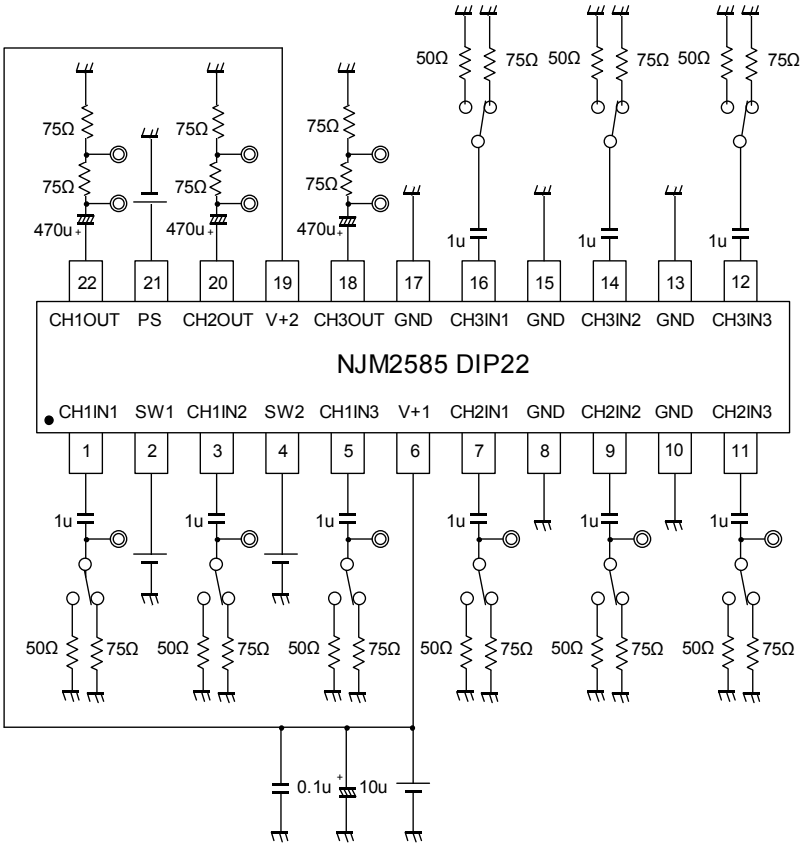
PARAMETER	STATUS		NOTE
SW Control	SW1	SW2	
	L, OPEN	X	IN1 (X=don't care)
	H	L, OPEN	IN2
	H	H	IN3

■TERMINAL FUNCTION

PIN NO.	PIN NAME	EQUIVALENT CIRCUIT	DC VOLTAGE (V+=5V)	NOTE
1 3 5 8 10 12 13 15 17	CH1IN1 CH1IN2 CH1IN3 CH2IN1 CH2IN2 CH2IN3 CH3IN1 CH3IN2 CH3IN3		2.5V	
20 22 24	CH3OUT CH2OUT CH1OUT		2.5V	
2 4	SW1 SW2		0V	
23	PowerSave		0V	

■TEST CIRCUIT

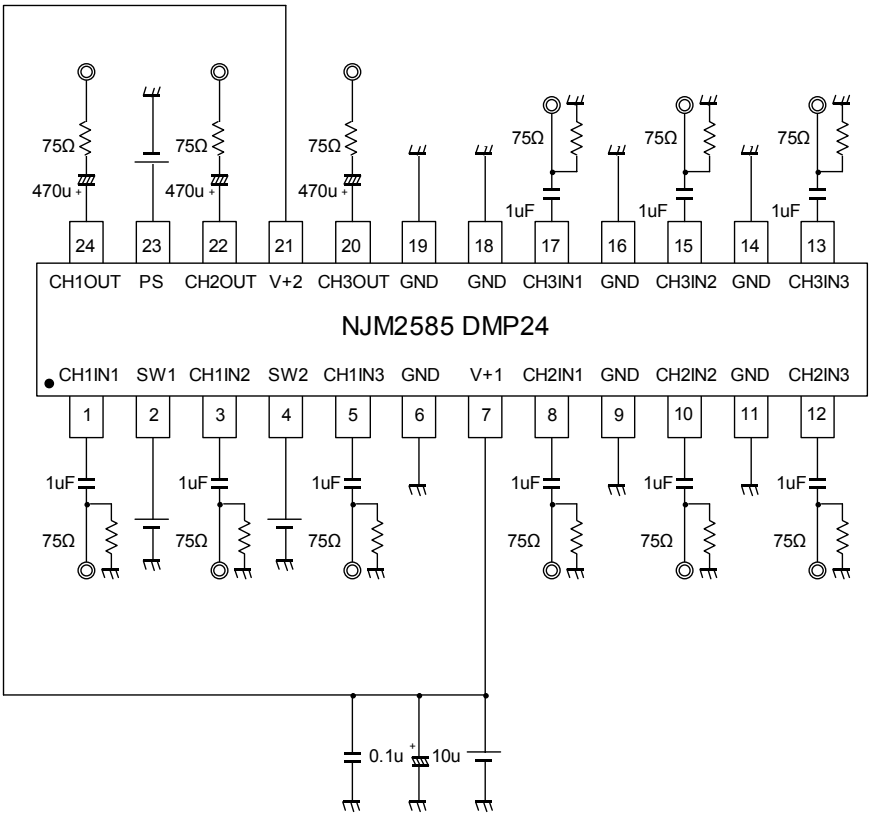


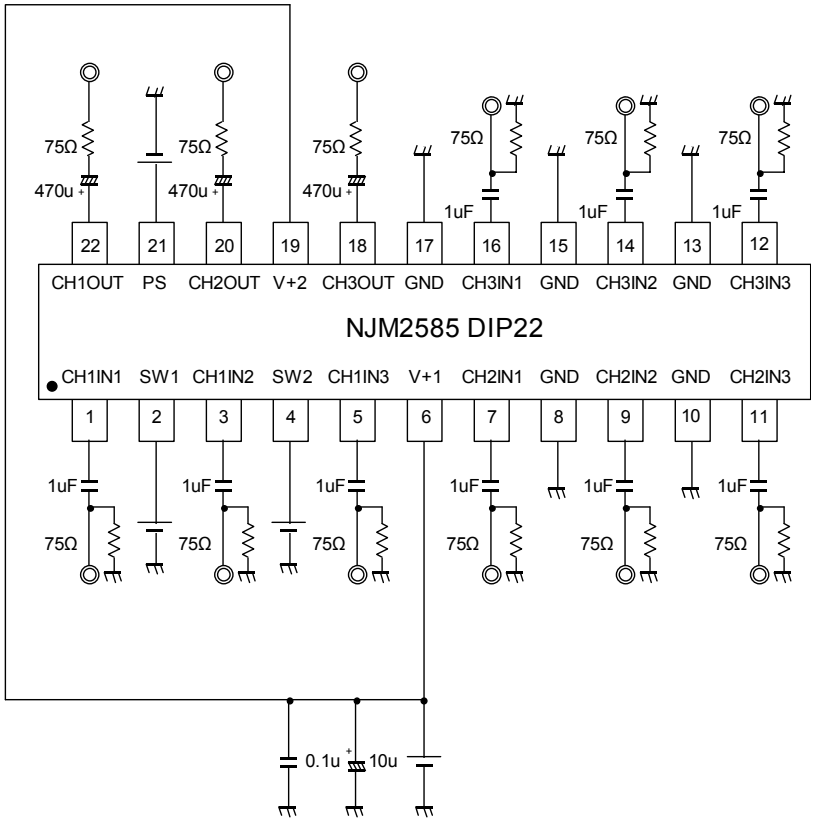


■NOTE

Please ground all GND terminals.

■APPLACATION CIRCUIT



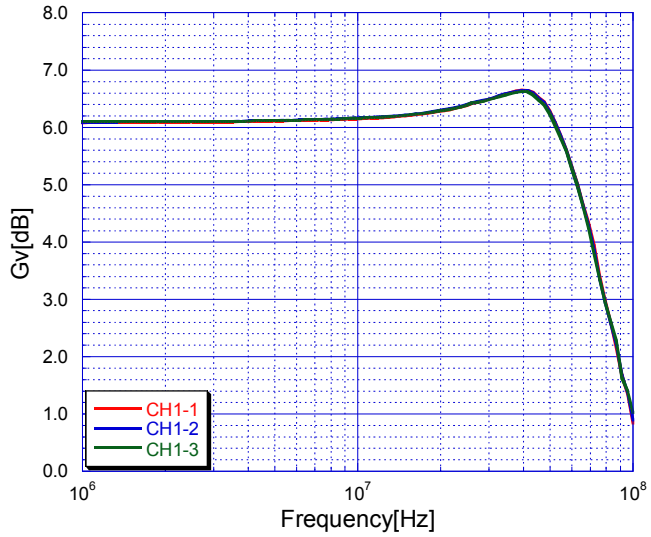


■NOTE

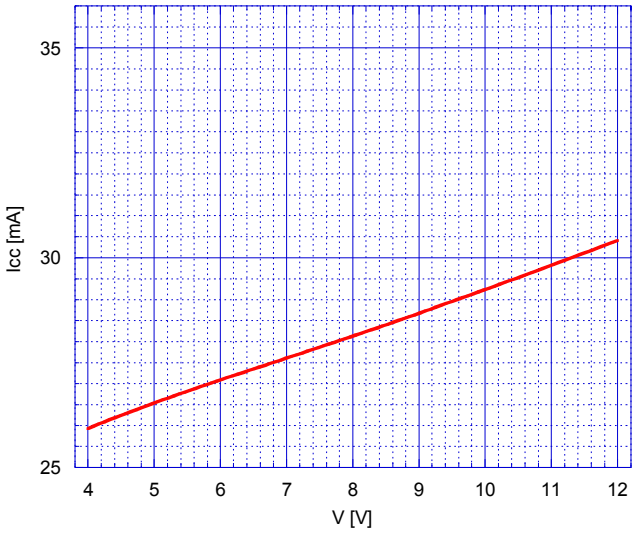
Please ground all GND terminals.

■TYPICAL CHARACTERISTICS

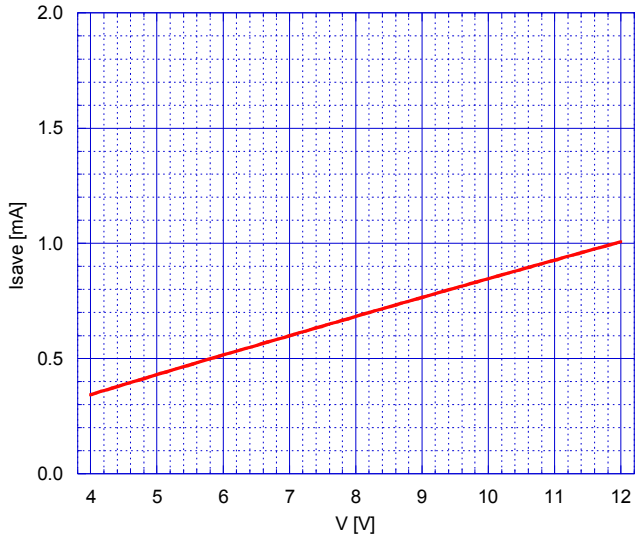
Voltage Gain vs Frequency



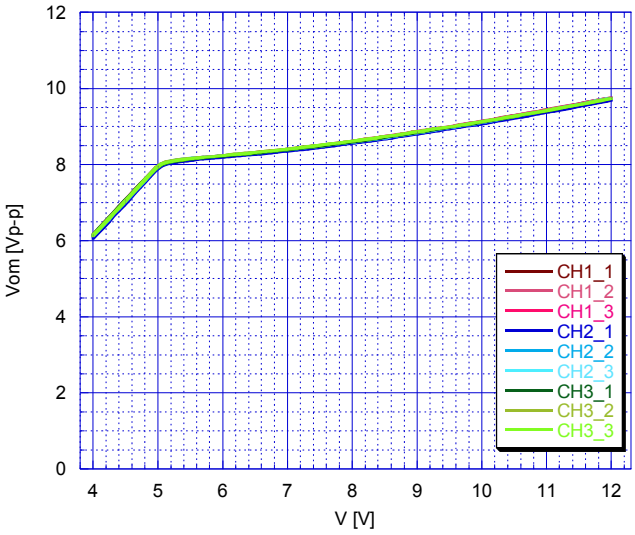
V vs Icc



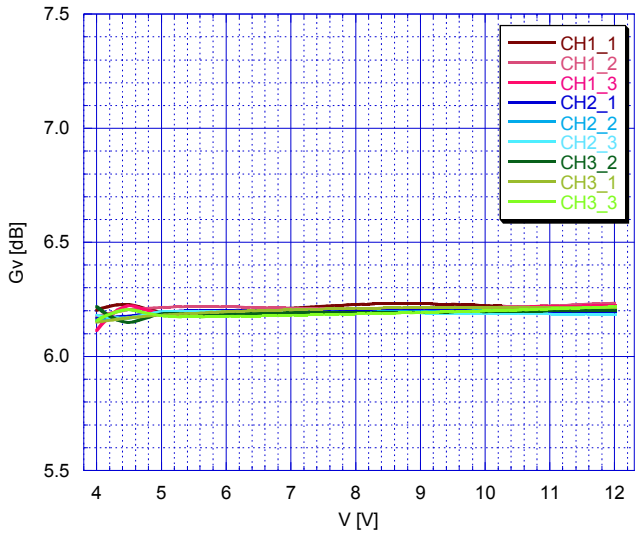
V vs Isave



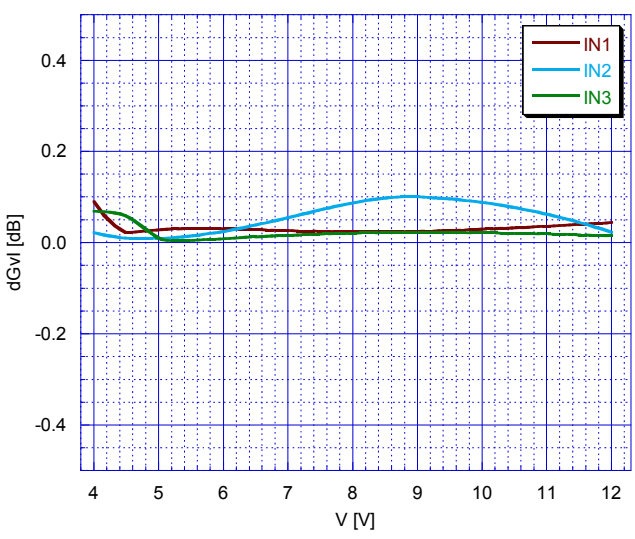
V vs Vom



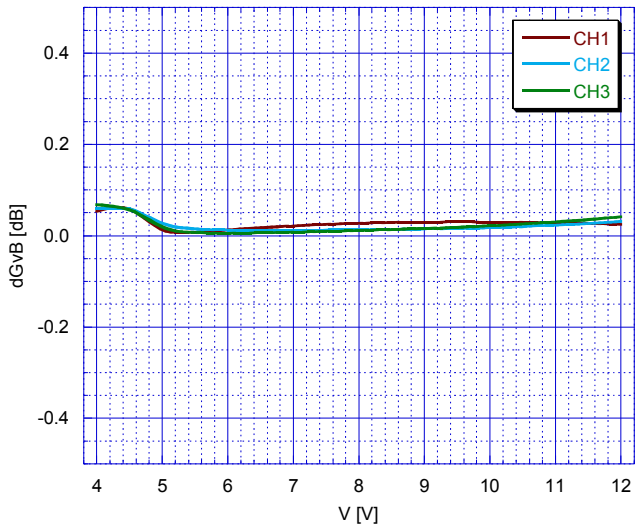
V vs Gv



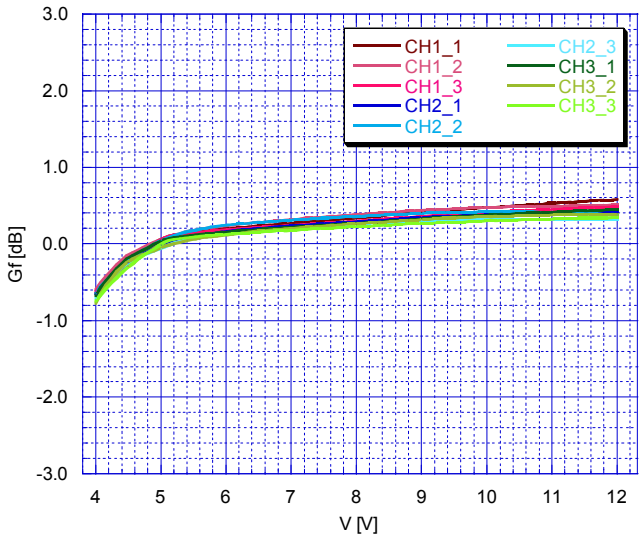
V vs dGvI



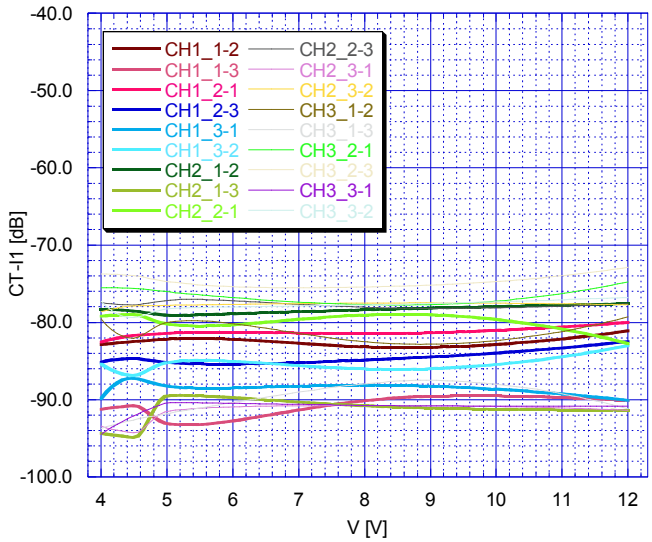
V vs dGvB



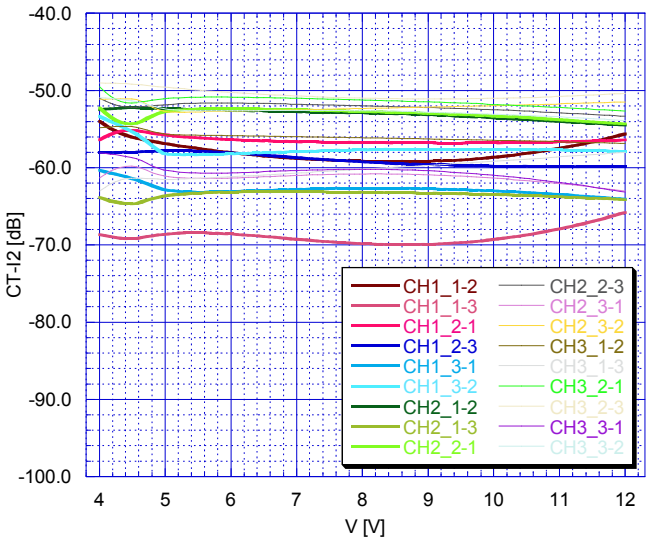
V vs Gf



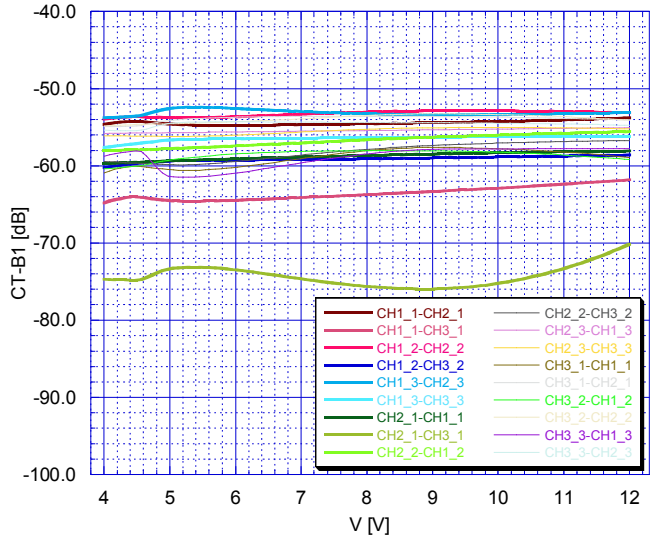
V vs CT- I1



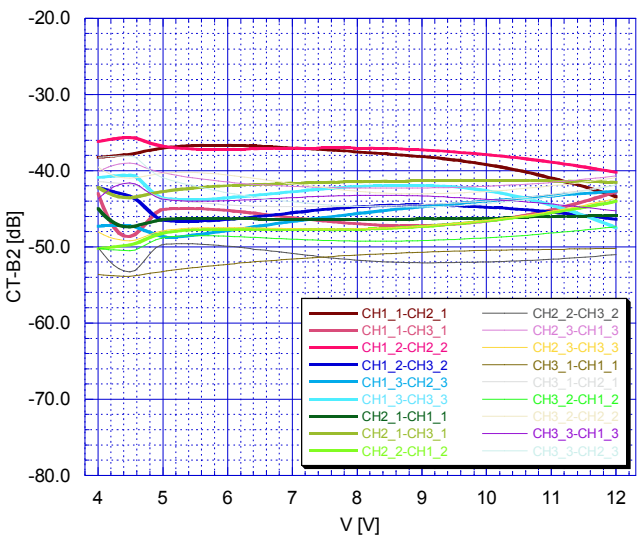
V vs CT- I2



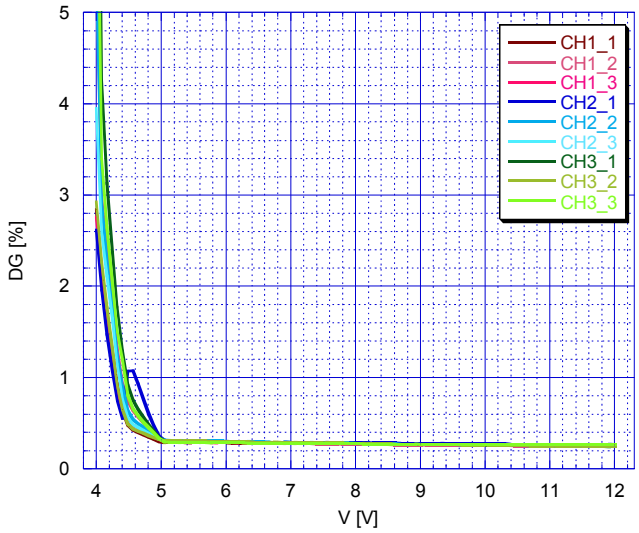
V vs CT- B1



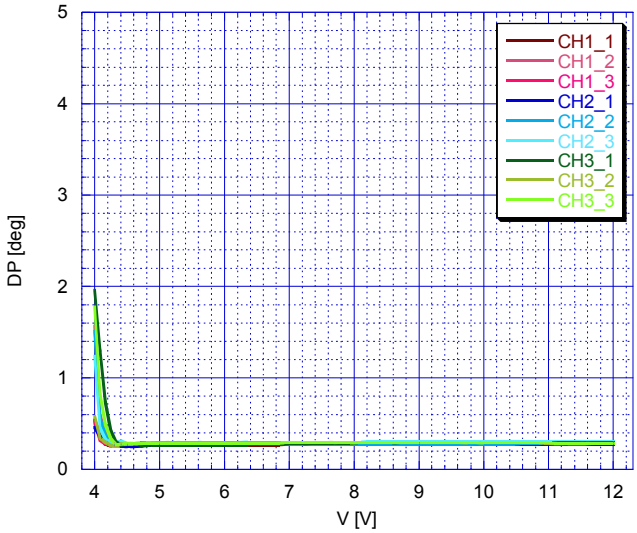
V vs CT- B2



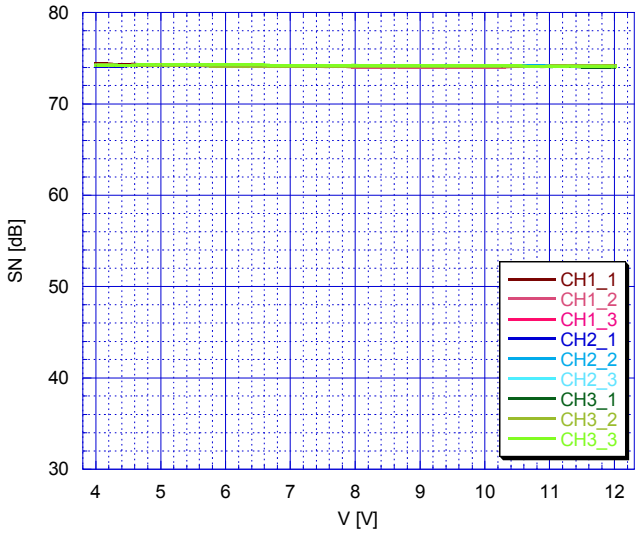
V vs DG



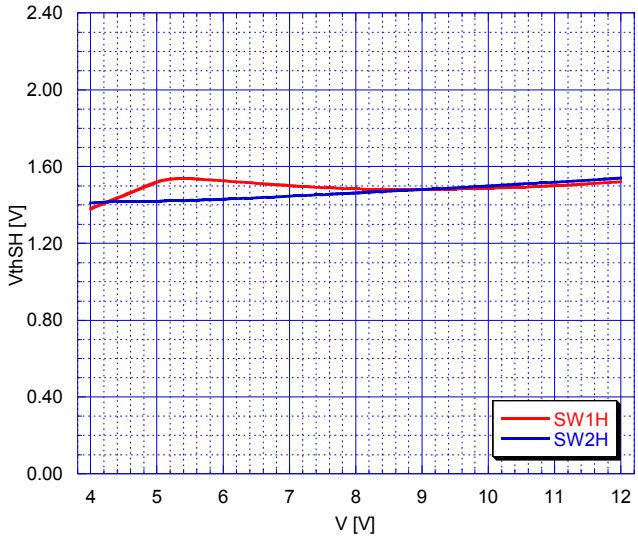
V vs DP



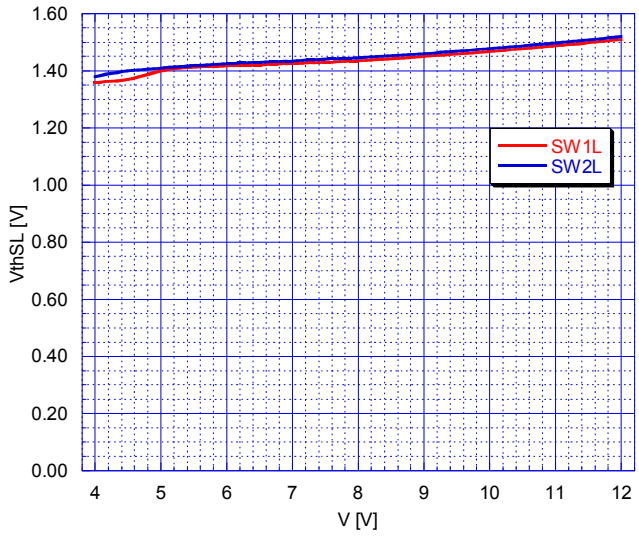
V vs SN



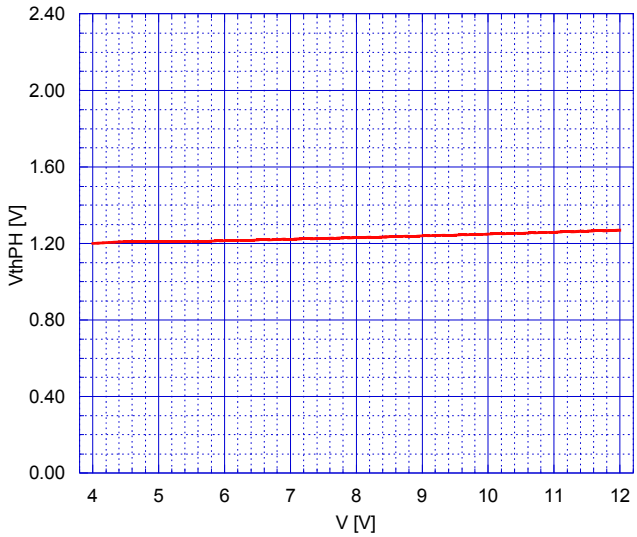
V vs VthSH



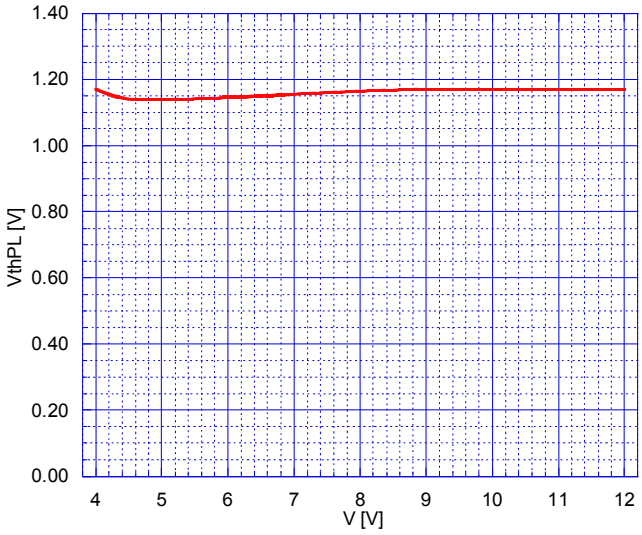
V vs VthSL



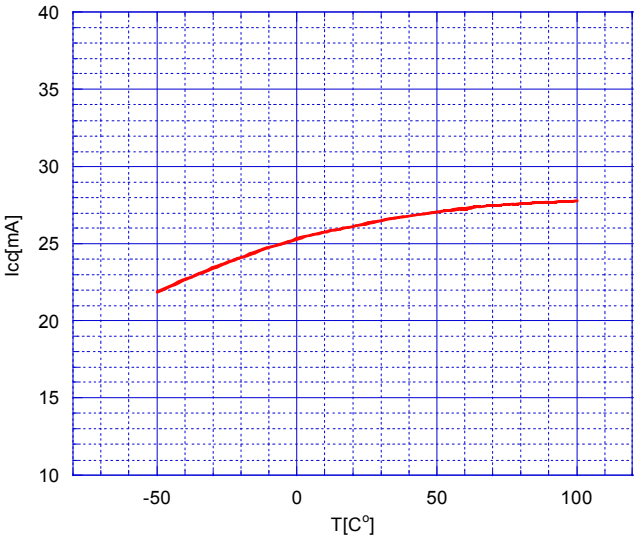
V vs VthPH



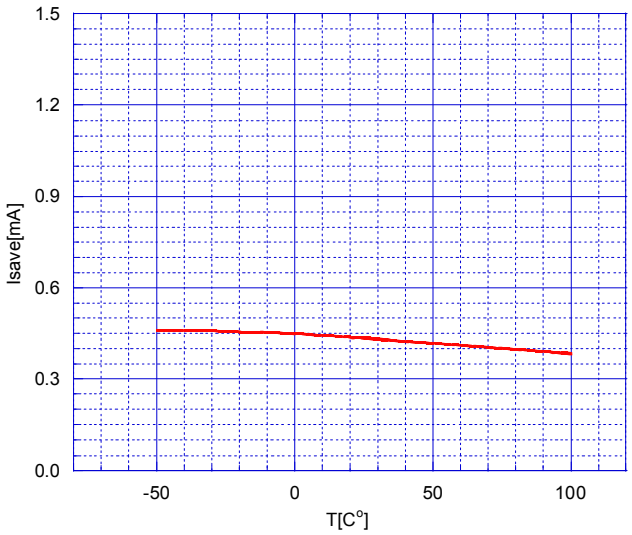
V vs VthPL



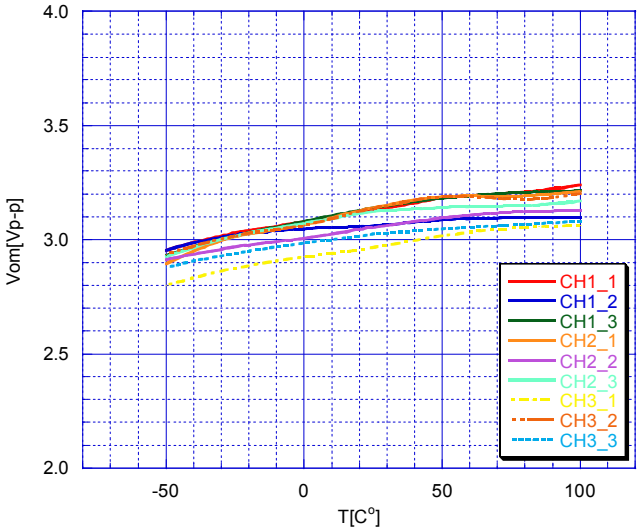
T vs Icc



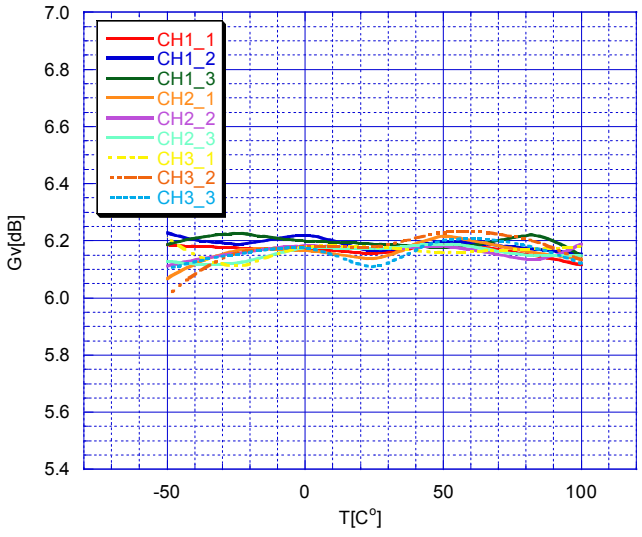
T vs Isave



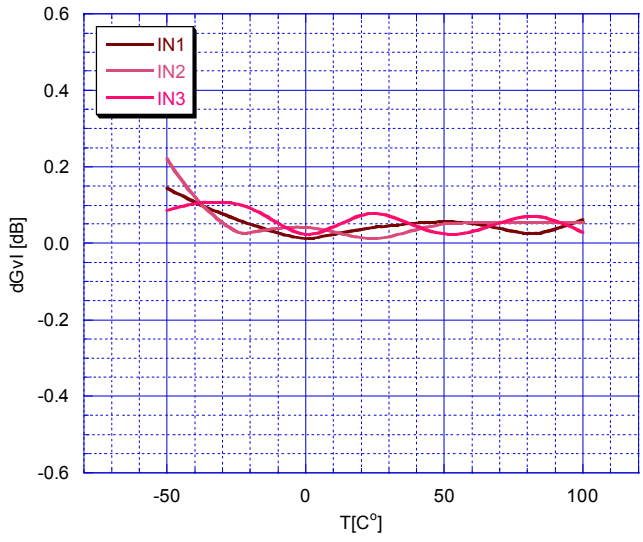
T vs Vom



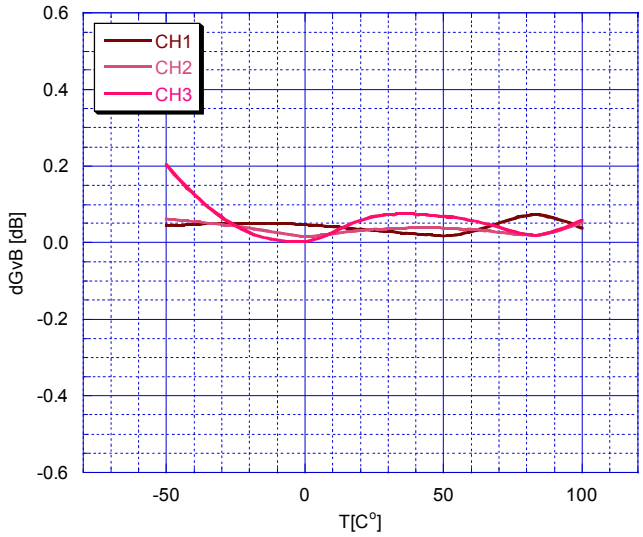
T vs Gv



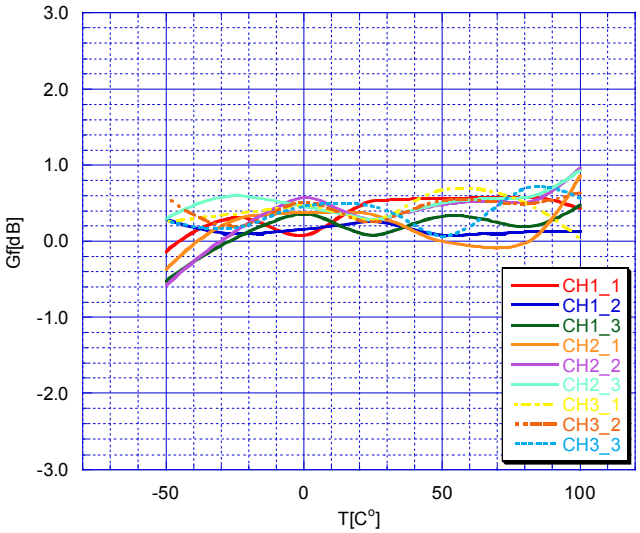
T vs dGvI



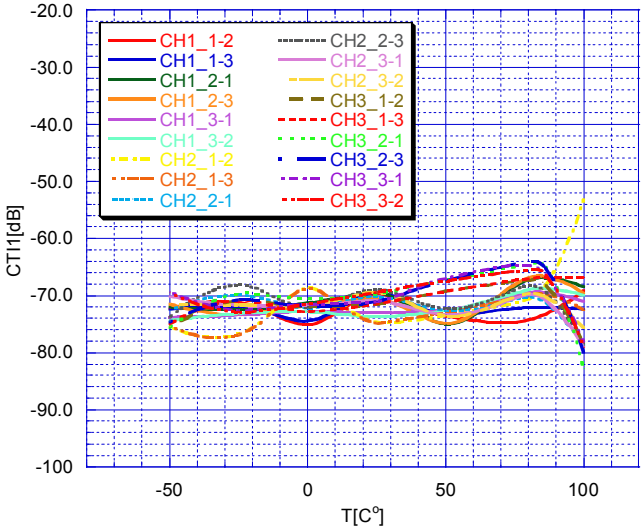
T vs dGvB



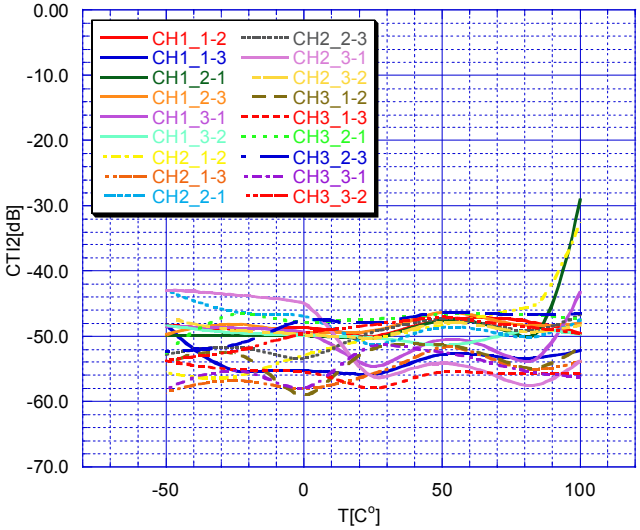
T vs Gf



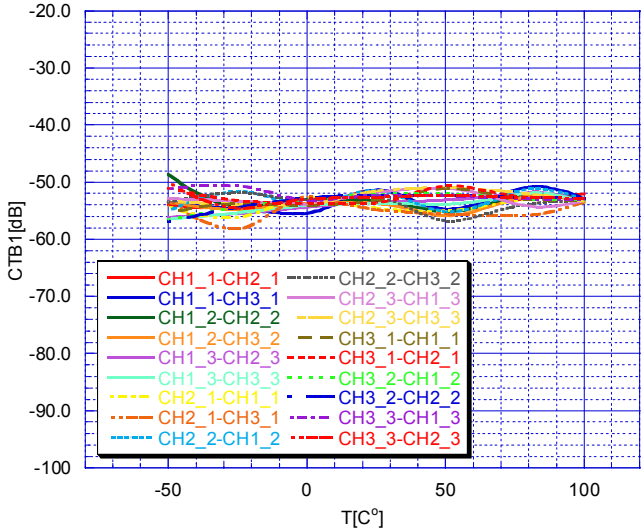
T vs CTI1



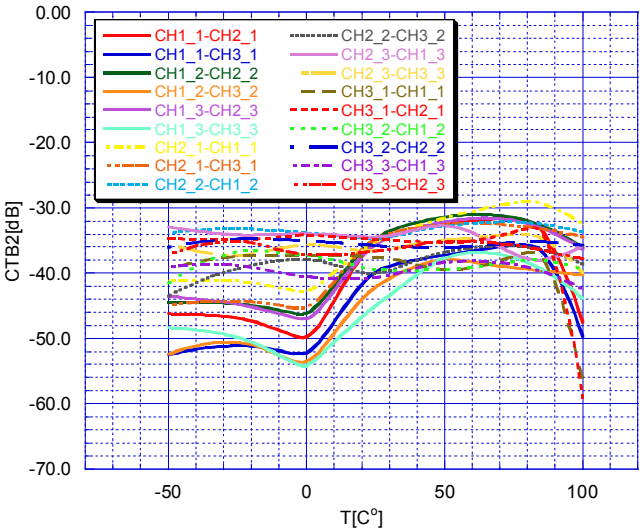
T vs CTI2



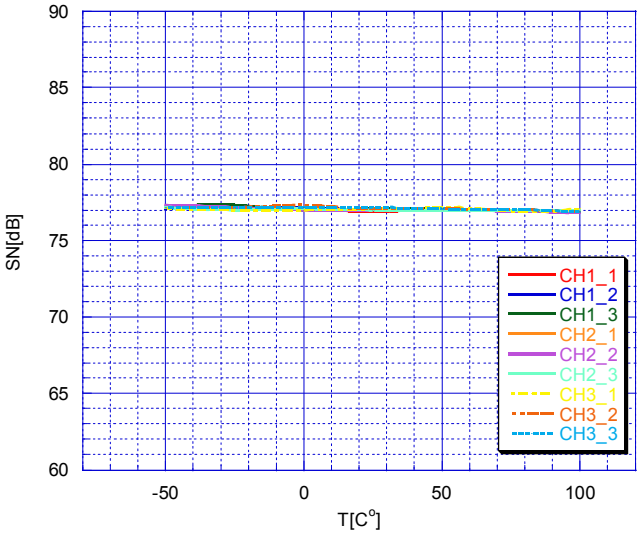
T vs CTB1



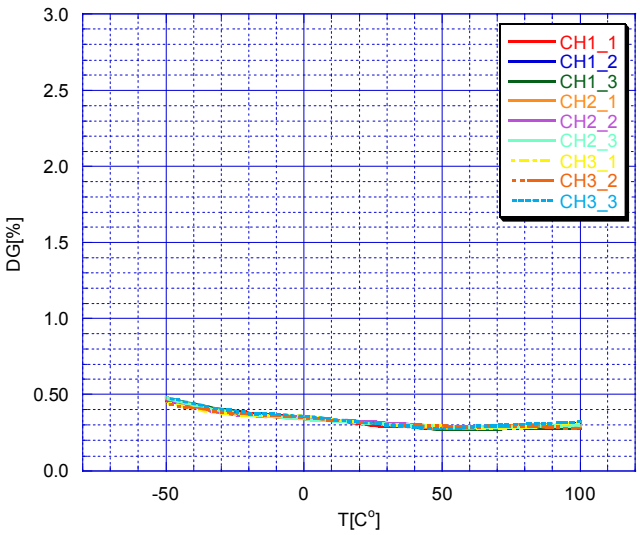
T vs CTB2



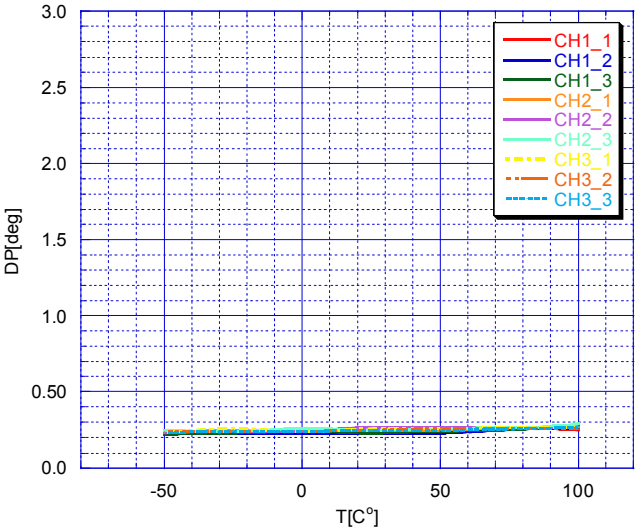
T vs SN



T vs DG



T vs DP



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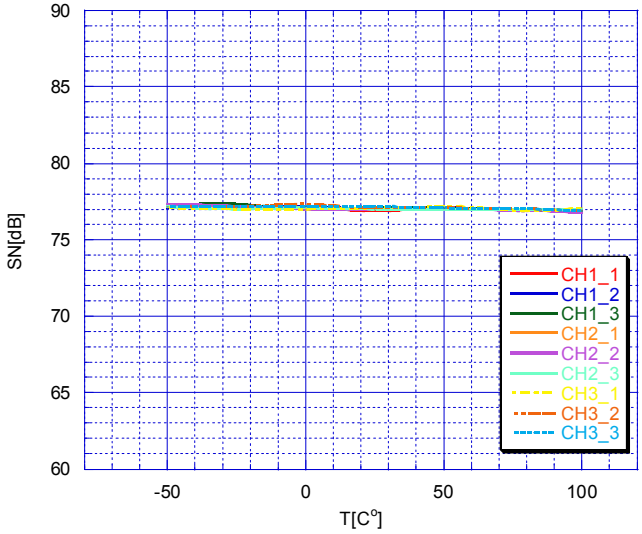
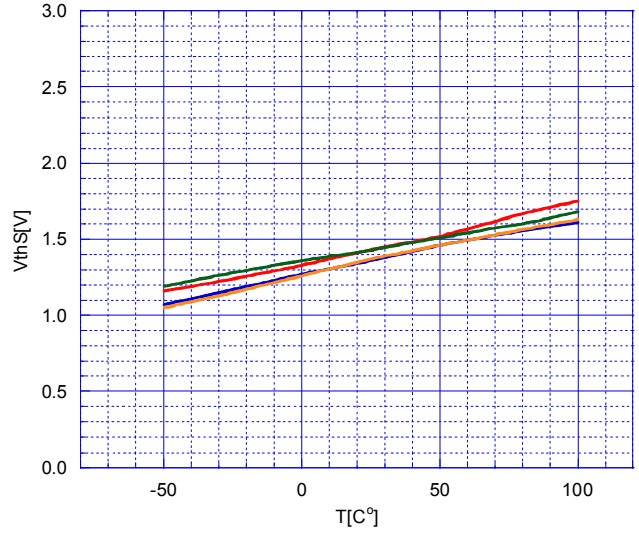


T vs VthS



T vs VthP