VIDEO DIFFERENTIAL OUTPUT DRIVER

■GENERAL DESCRIPTION

The NJM2504 is video differential output driver. The single-end signal is converted to the differential signal. The single-end signal can be transmitted by the differential signal by the connection with NJM2507.

And, it is converted to the single-end signal by the NJM2507.

The common mode noise can be removed because of the differential motion transmission, and it is the best for the transmission of car AV system.

■PACKAGE OUTLINE

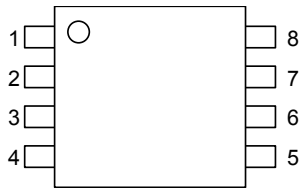
NJM2504RB1
MSOP8(TVSP8)

■FEATURES

- Operating Voltage 4.5 to 9.5V
- Input: Single-end signal, Output: Differential signal
- Internal 6dB Amplifier
- Internal 75ohm Driver
- Internal SAG Correction Circuit
- Bipolar Technology
- Package Outline MSOP8(TVSP8)*

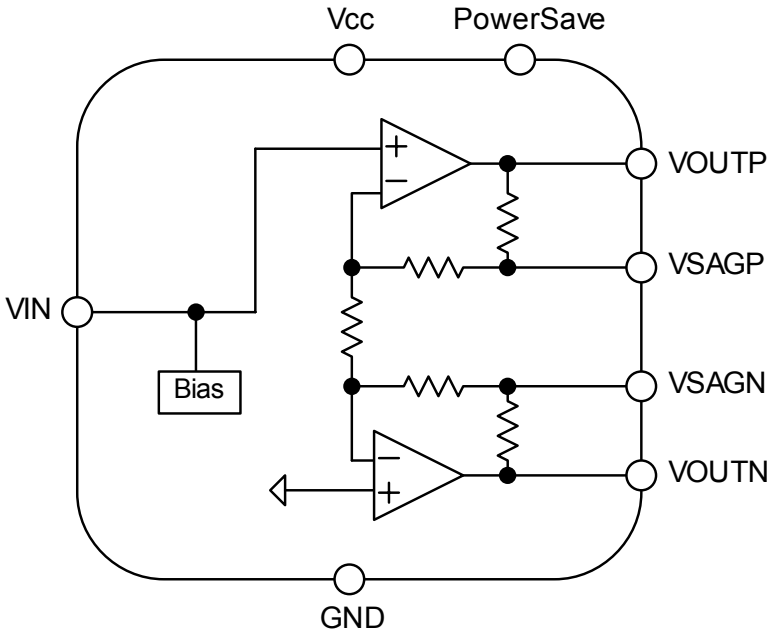
*MEET JEDEC MO-187-DA / THIN TYPE

■PIN CONNECTION



1: V+
2: Power Save
3: VIN
4: GND
5: Vsagn
6: Voutn
7: Vsagp
8: Voutp

■BLOCK DIAGRAM



Ver.8

■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	10	V
Power Dissipation	P_D	580(Note1)	mW
Operating Temperature Range	Topr	-40 to +85(Note2)	°C
Storage Temperature Range	Tstg	-40 to +150	°C

(Note 1) At on a board of EIA/JEDEC specification. (114.3 x 76.2 x 1.6mm 2 layers, FR-4)
(Note 2) It has high operating temperature range product. (-40 to +105°C)

■RECCOMENDED OPERATING CONDITIONS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating voltage	Vopr		4.5	-	9.0	V

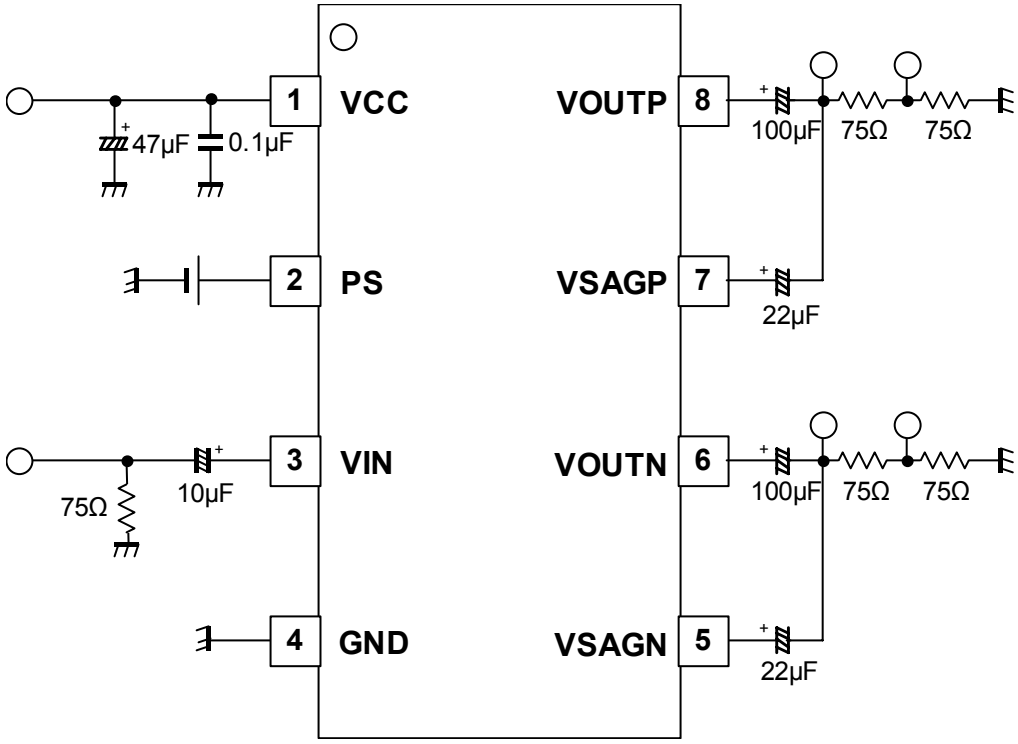
■ELECTRICAL CHRACTERISTCS (V^+ =5V, RL=150ohm,Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I_{CC}	No signal	-	16	20	mA
Supply Current at Power Save Mode	Isave	Power save mode	-	0.3	0.5	mA
Maximum Output Level	Vom	Vin=100kHz,sin-signal, THD=1%,	2.2	2.4	-	Vp-p
Voltage Gain	Gv	Vin=1MHz, 1.0Vp-p sin-signal	5.7	6.2	6.7	dB
Frequency Characteristics	Gf	Vin=10MHz/1MHz, 1.0Vpp sin-signal	-1.0	0	1.0	dB
Differential Gain	DG	Vin=1.0Vp-p 10step video signal	-	0.5	-	%
Differential Phase	DP	Vin=1.0Vp-p 10step video signal	-	0.5	-	deg
SW Voltage High Level	VthH		2.2	-	V^+	V
SW Voltage Low Level	VthL		0	-	1.0	V
SW Sink Current High Level	IthH	V=5V	-	-	120	μA
SW Sink Current Low Level	IthL	V=0.3V	-	-	8.0	μA

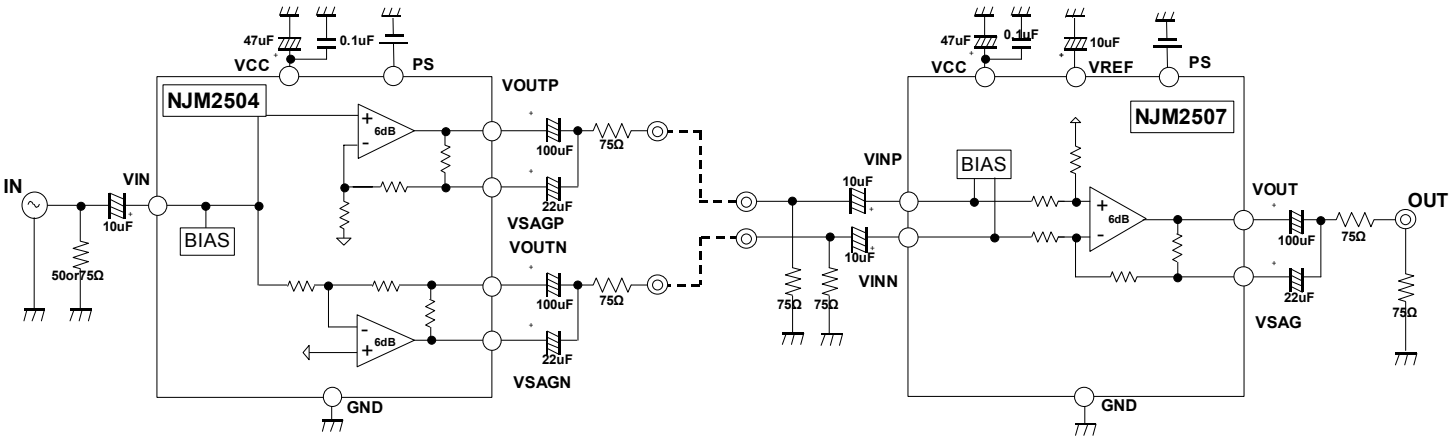
■CONTROL CHRACTERISTC

PARAMETER	STATUS	MODE	
Power Save	H	Power save: OFF	Active mode
	L	Power save: ON	Non-Active mode (Mute)
	OPEN	Power save: ON	Non-Active mode (Mute)

■TEST CIRCUIT

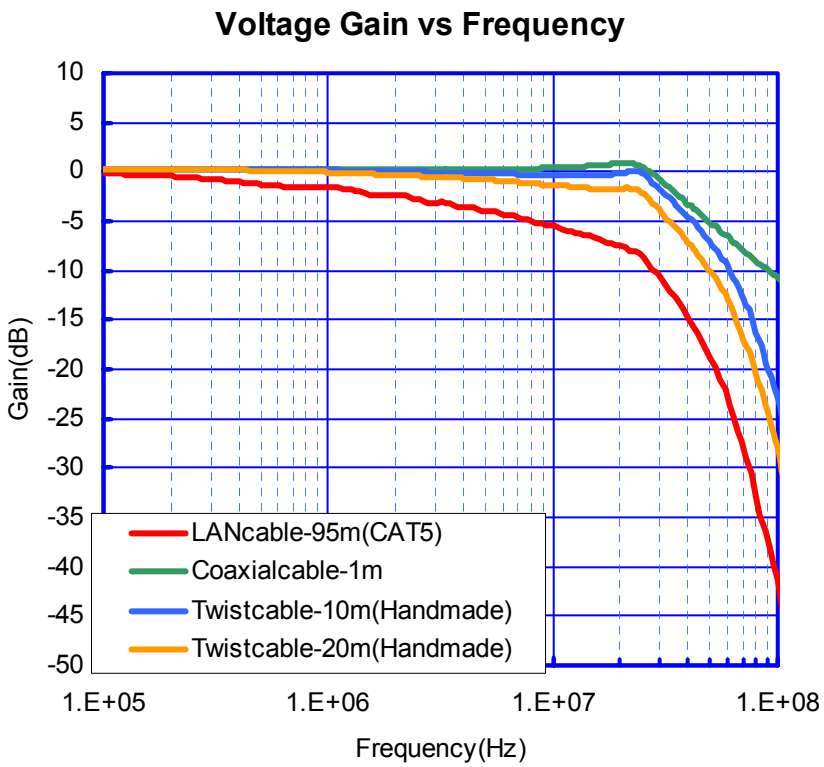


■APPLICATION CIRCUIT

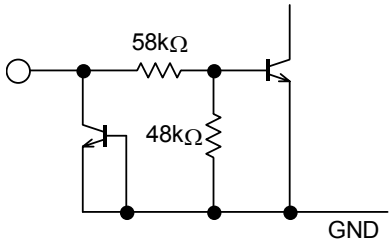
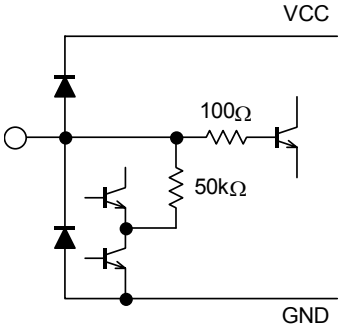
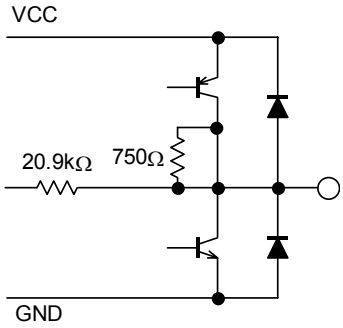
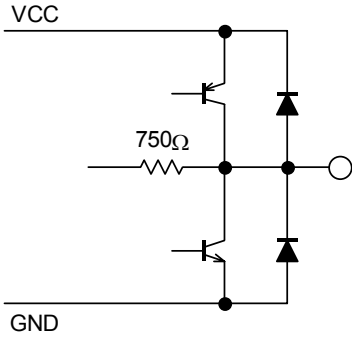
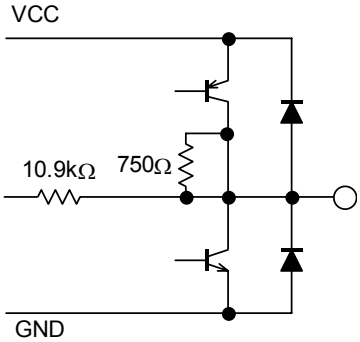


■APPLICATION

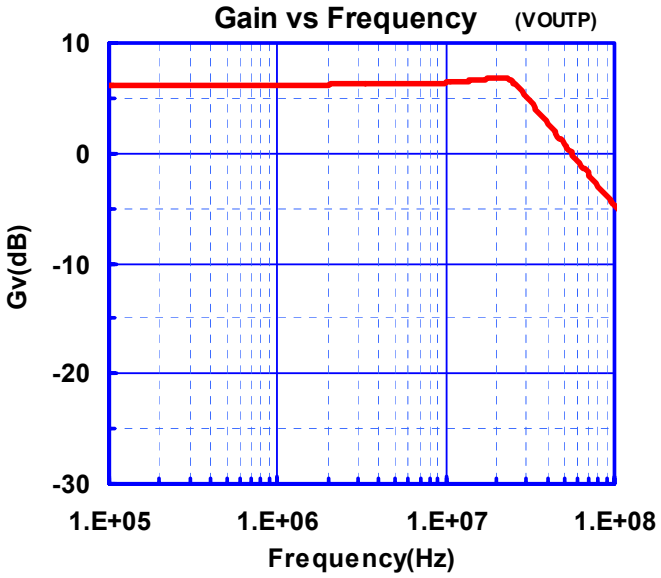
When use cable of than 20 meter, voltage gain is attenuated. Please make a adequate evaluation.
Refer to fig.

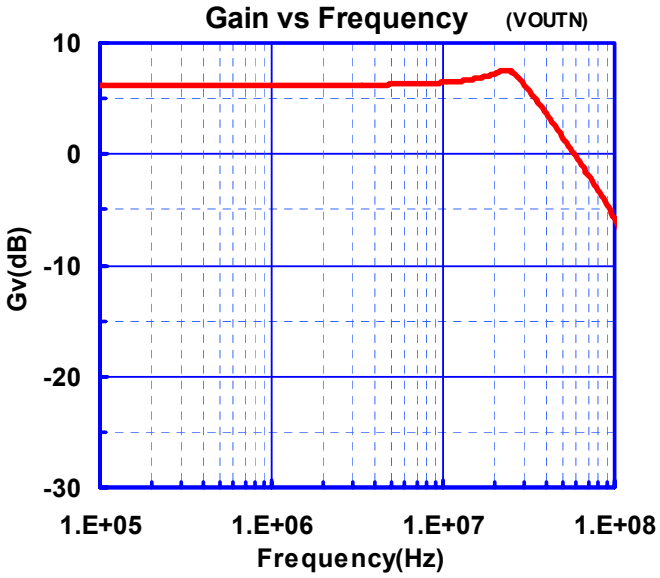


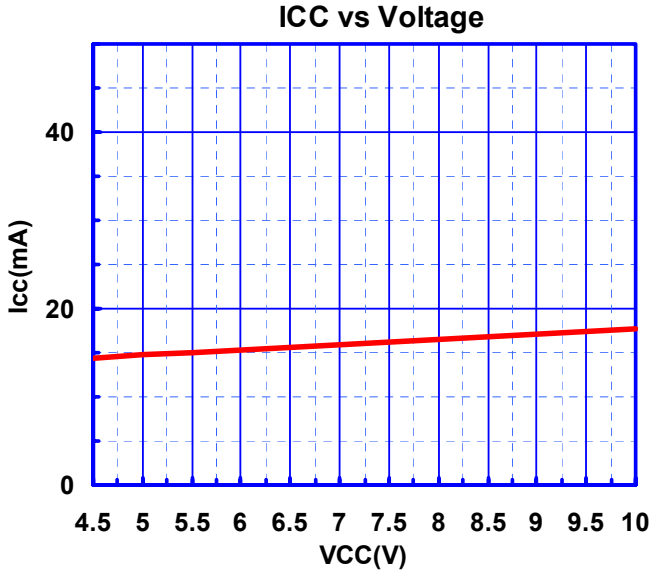
■ **EQUIVALENT CIRCUIT (Vcc=5V)**

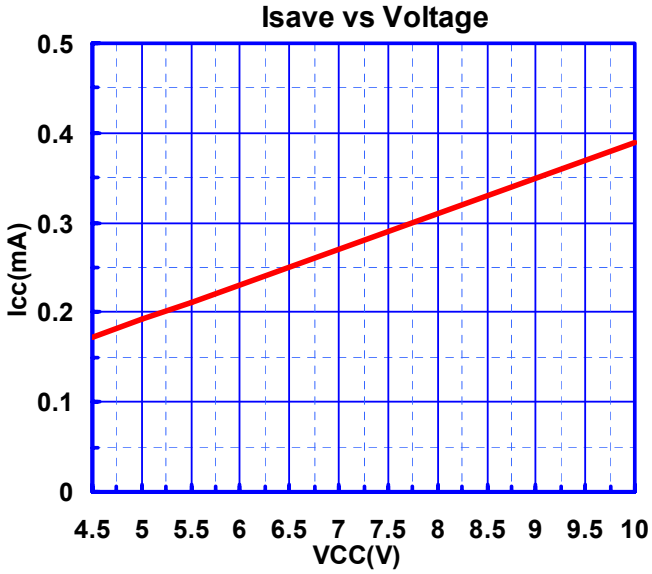
PIN No.	PIN NAME	EQUIVALENT CIRCUIT	DC VOLTAGE
1	Vcc		5V
2	Power Save		-
3	VIN		2.5V
4	GND		-
5	VSAGN		2.5V
6 8	VOUTN VOUTP		2.5V
7	VSAGP		2.5V

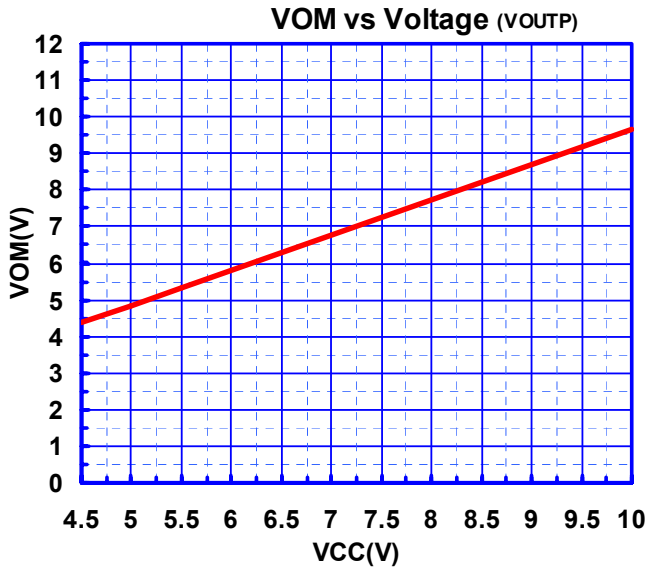
■TYPICAL CHARACTERISTICS

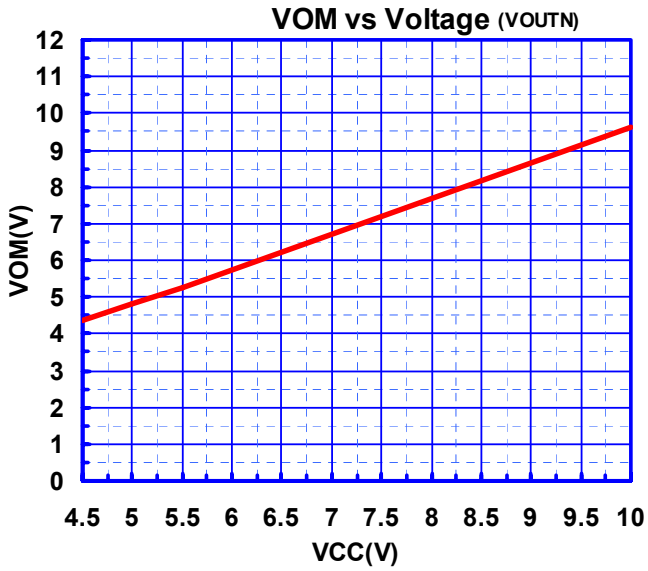




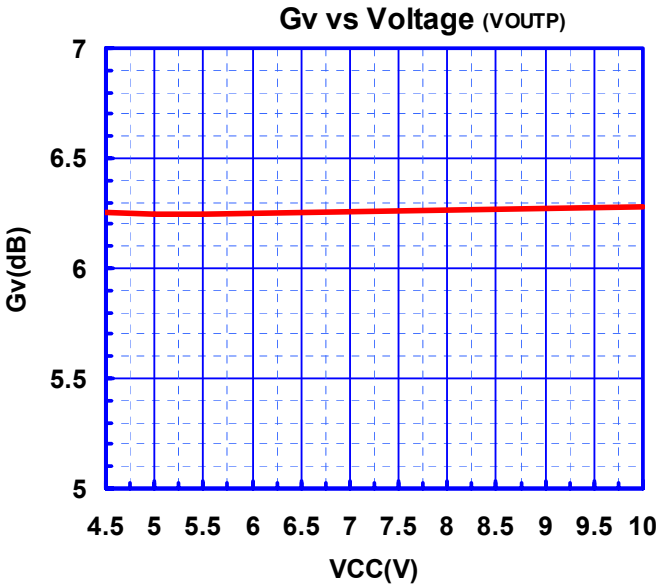


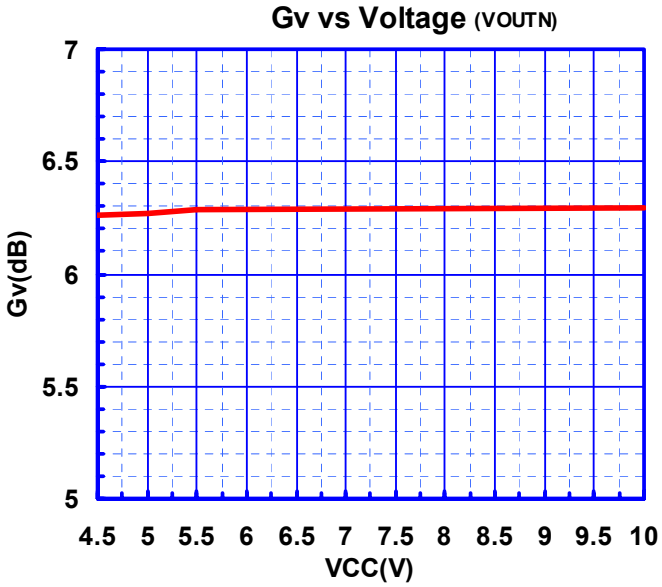


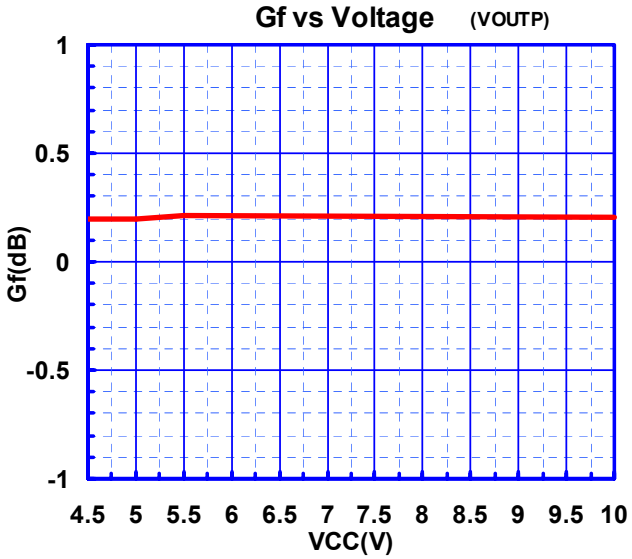


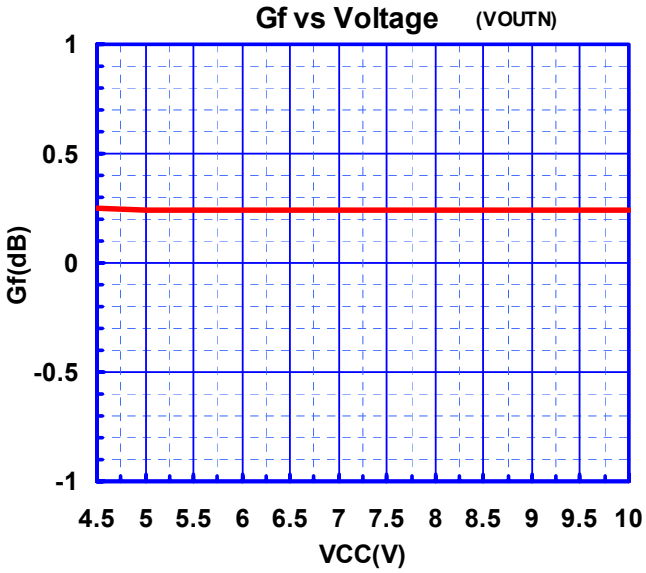


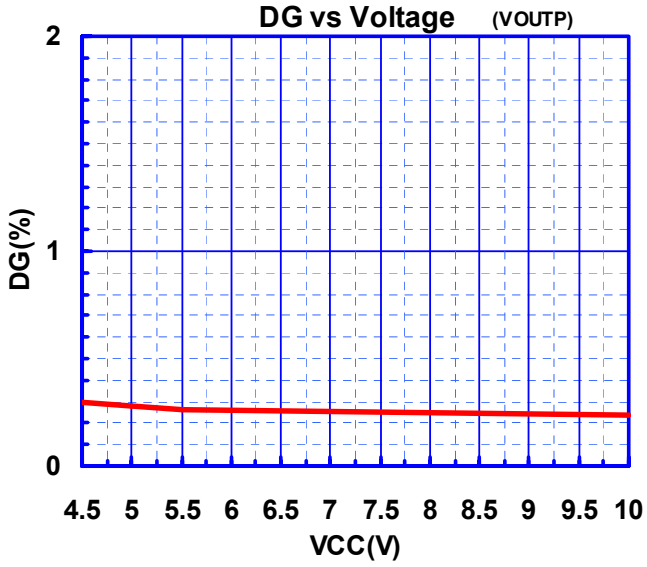
■TYPICAL CHARACTERISTICS

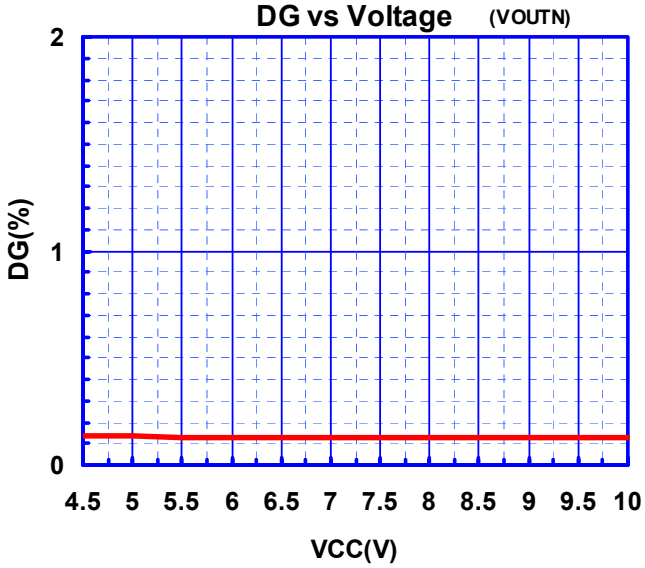












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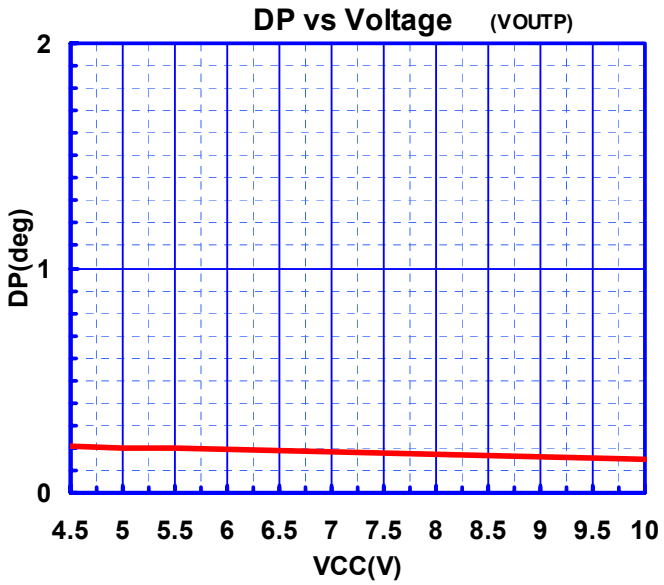

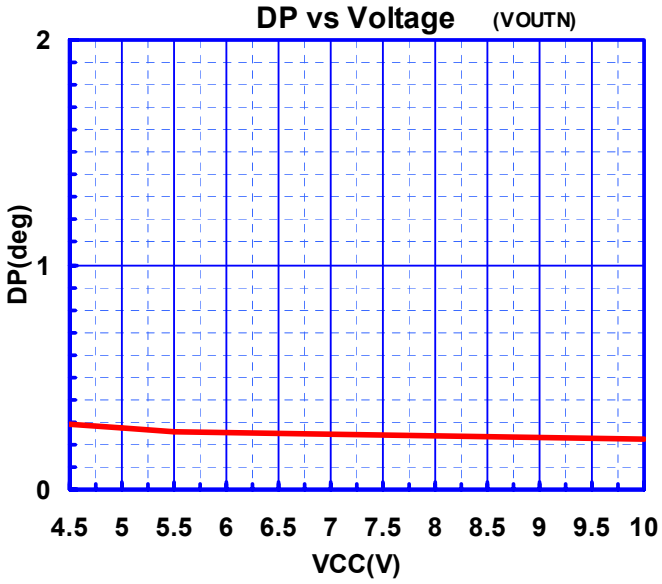

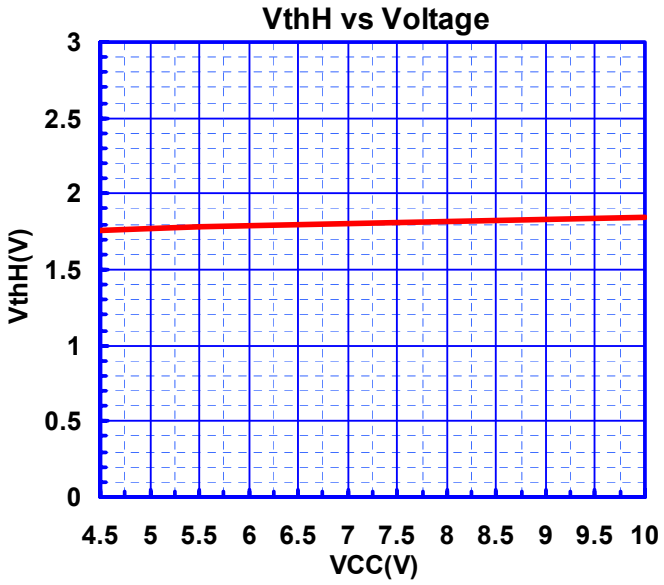

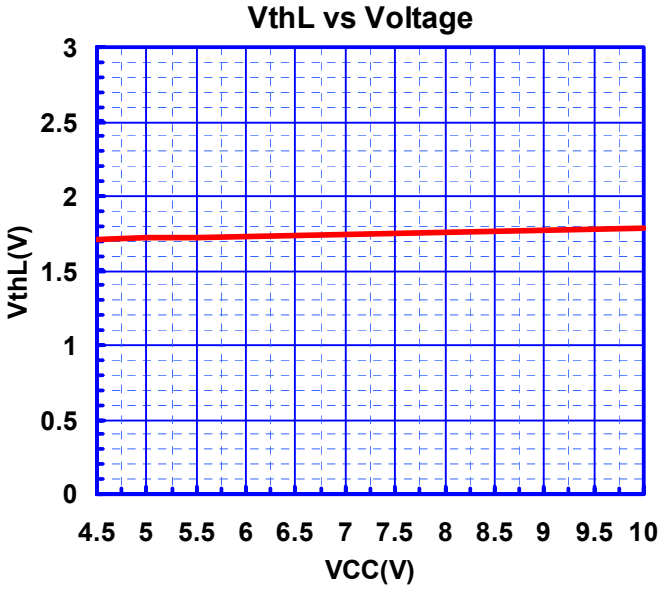

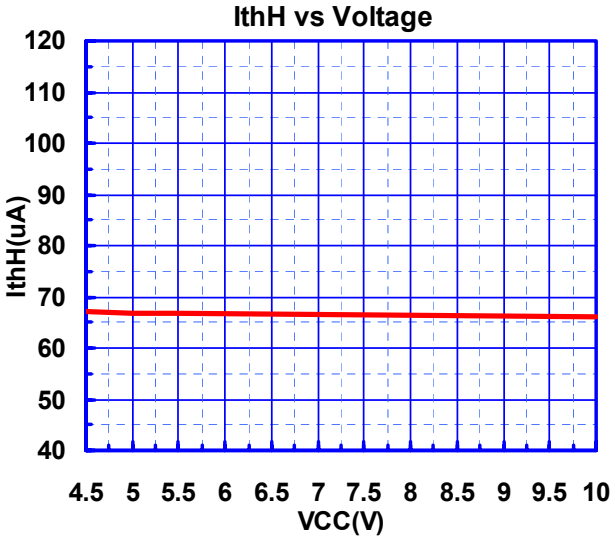

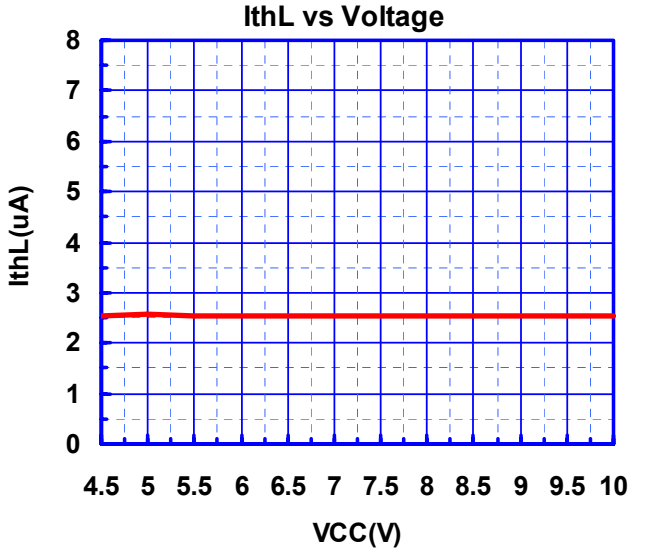

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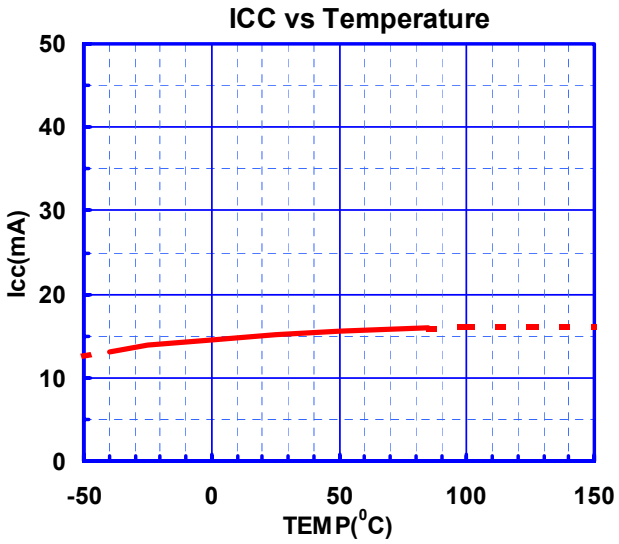

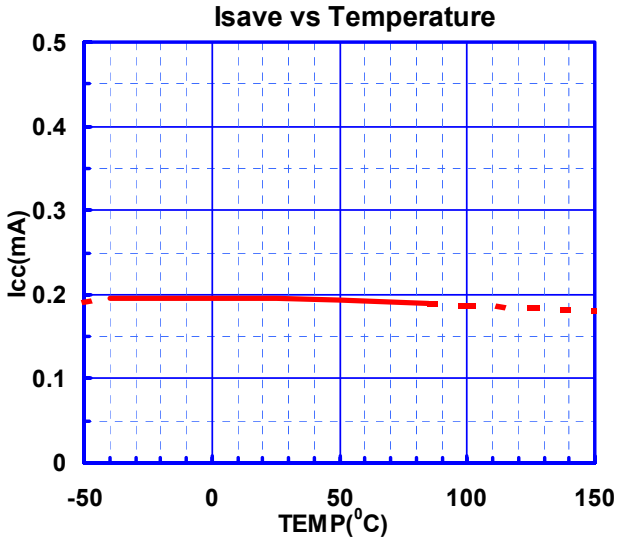

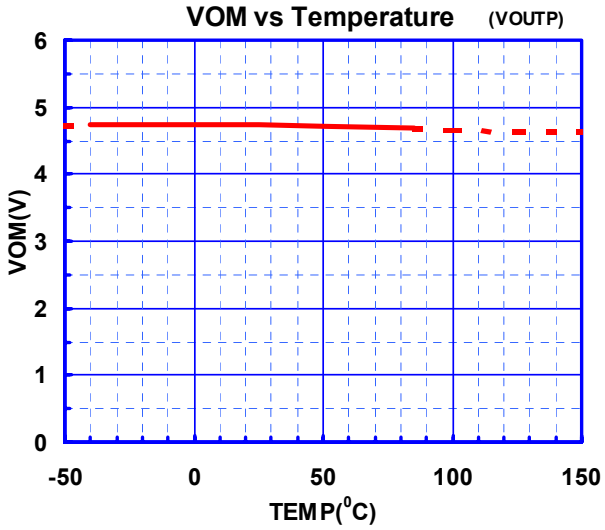

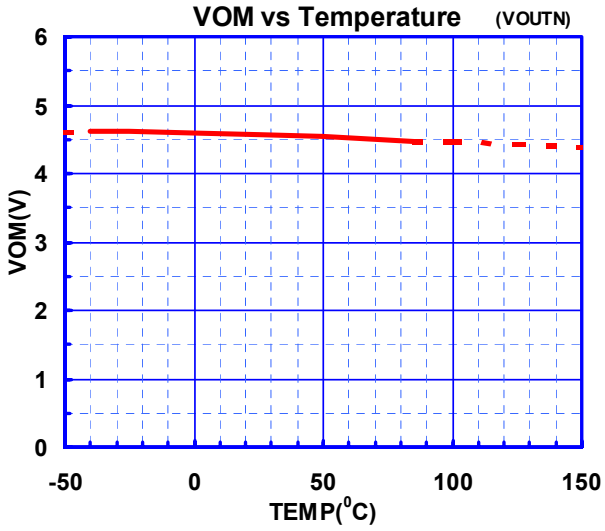

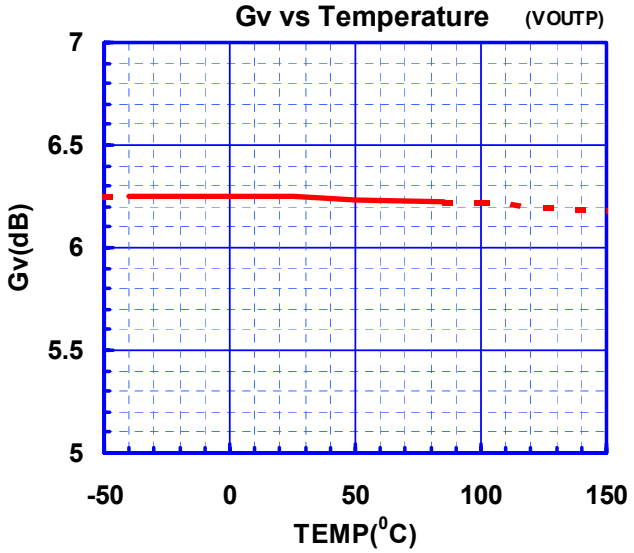

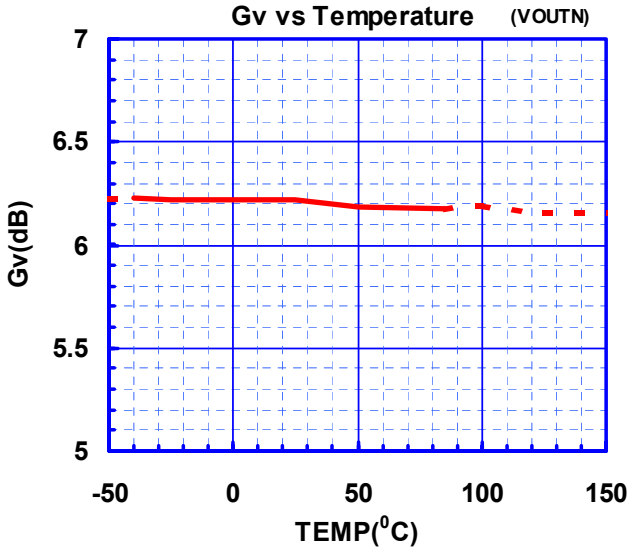

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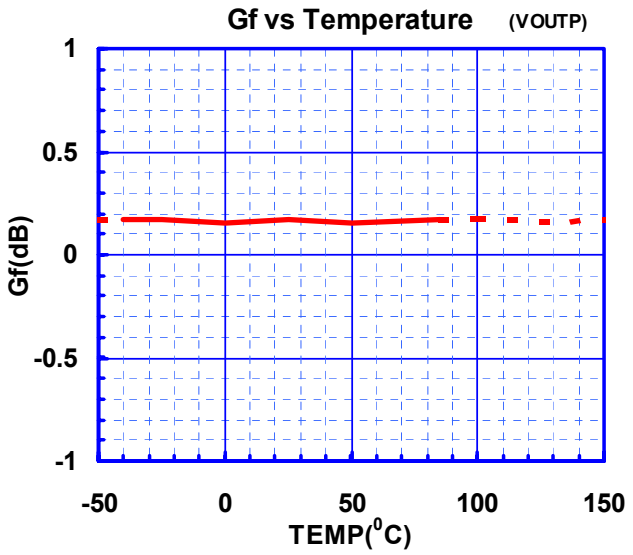
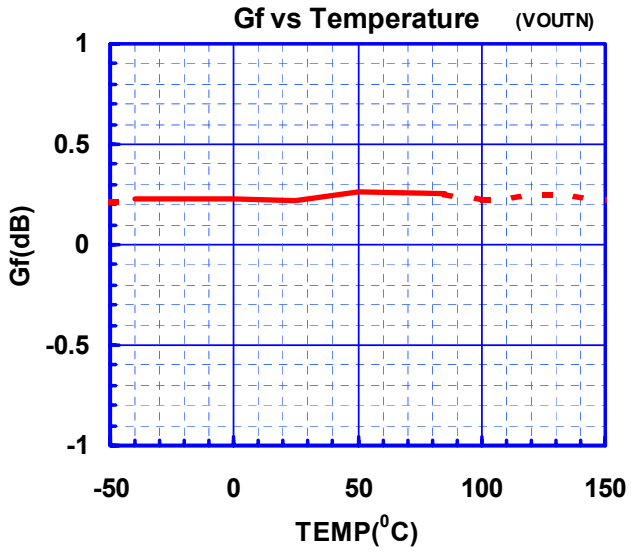
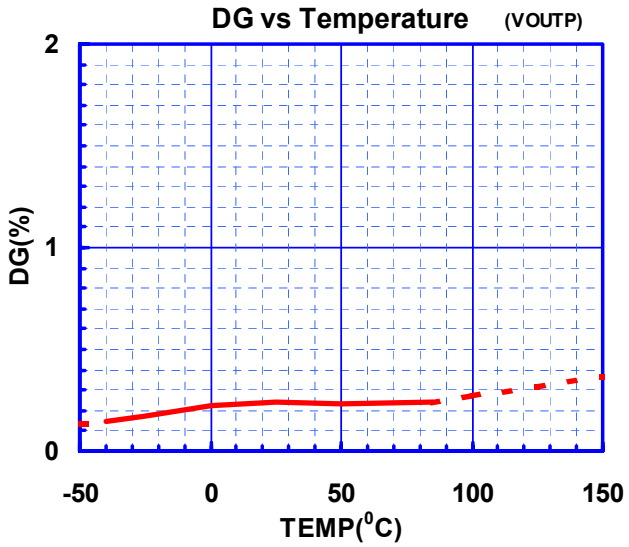
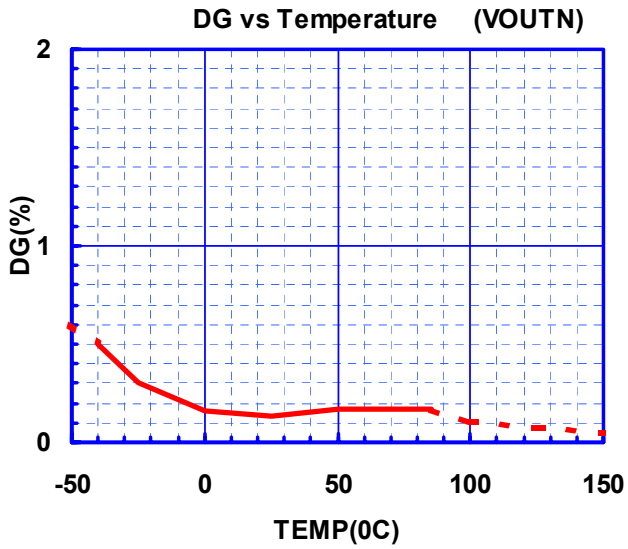
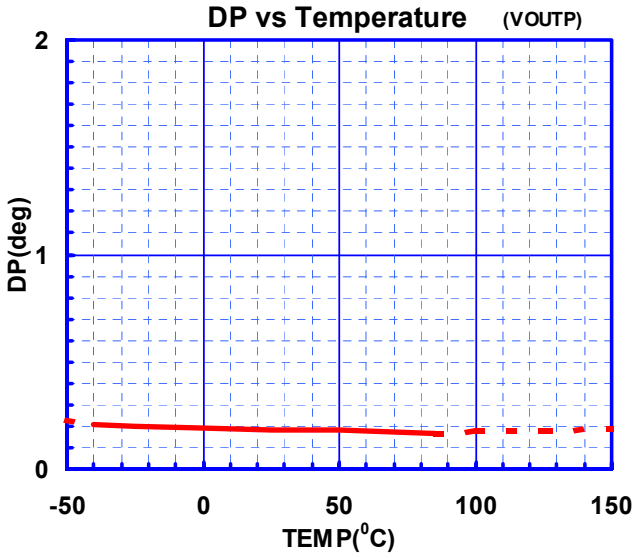
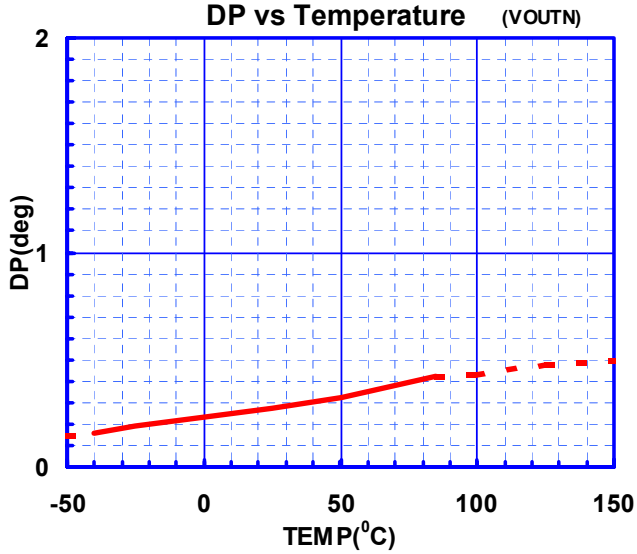




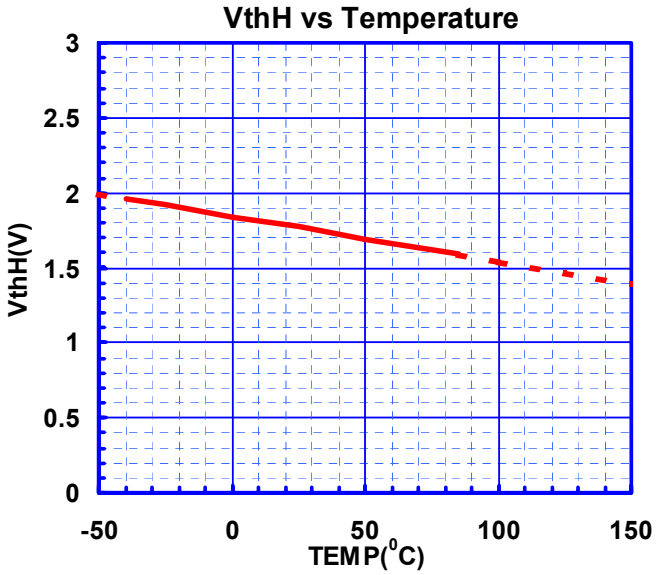


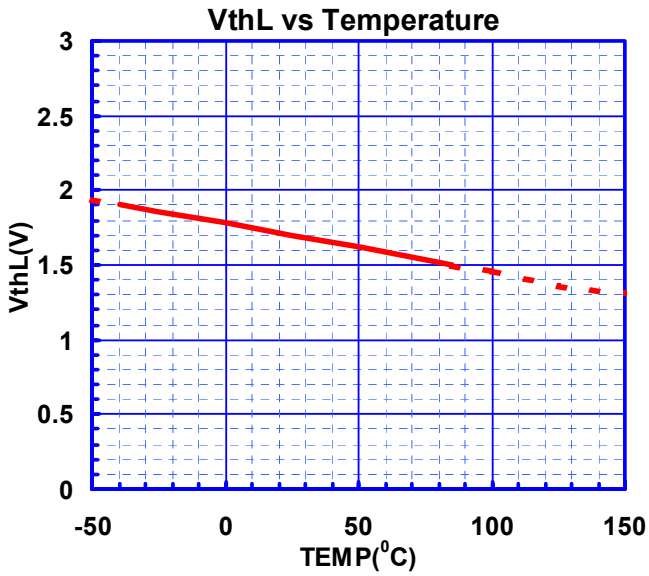


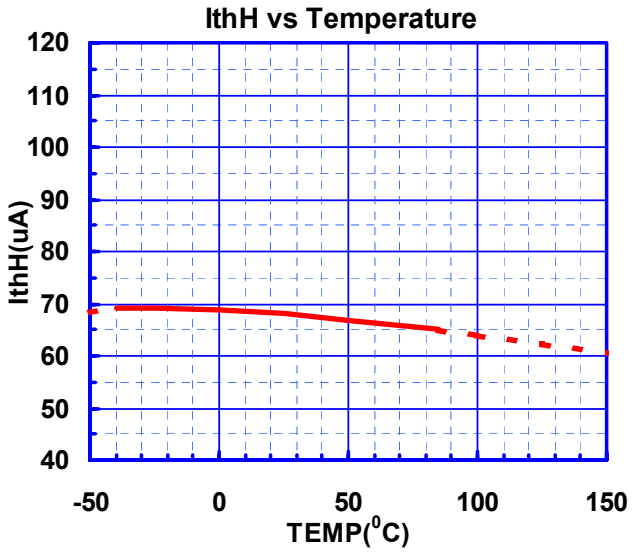


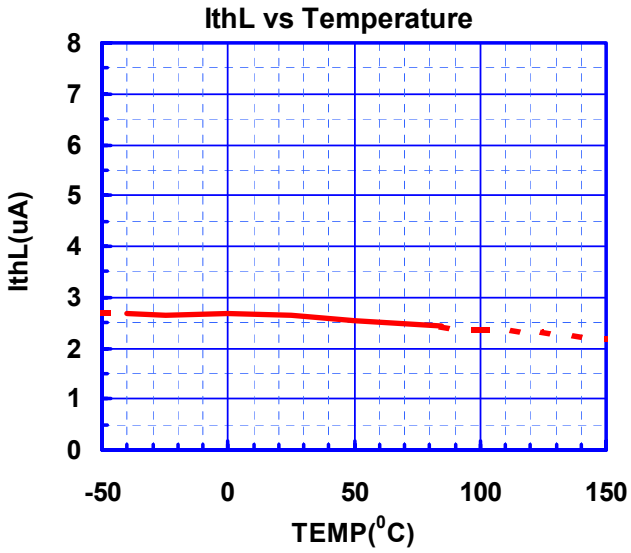


■TYPICAL CHARACTERISTICS









[CAUTION]
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Mouser Electronics

Authorized Distributor

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NJR:

NJM2504RB1-TE1

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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