

## VOLTAGE DETECTOR

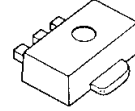
### ■ GENERAL DESCRIPTION

The NJU7719 is a low quiescent current voltage detector featuring high precision detection voltage.

The detection voltage is internally fixed with an accuracy of 1.0%.

NJU7719 is Nch. Open Drain output type.

### ■ PACKAGE OUTLINE

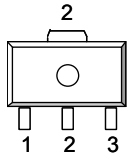


NJU7719U/U1

### ■ FEATURES

- High Precision detection Voltage      $\pm 1.0\%$
- Low Quiescent Current                  $0.8\mu\text{A typ.}$
- Detection Voltage Range                 $1.3 \sim 6.0\text{V}(0.1\text{V step})$
- Output Configuration                  Nch. Open Drain Type
- Package Outline                          SOT-89-3

### ■ PIN CONFIGURATION

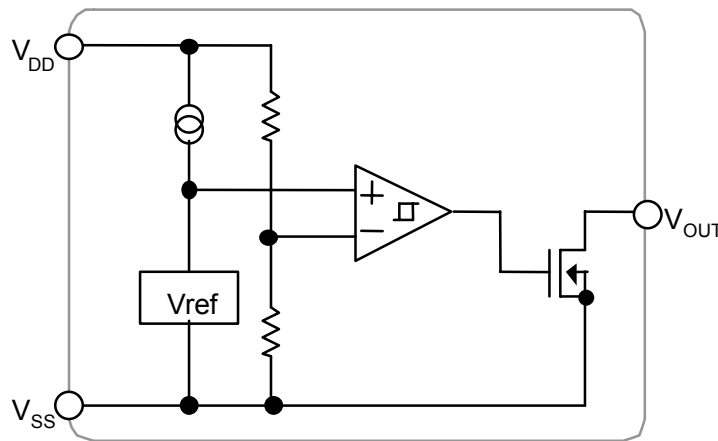


NJU7719U/U1

#### PIN FUNCTION

1.  $V_{DD}$
2.  $V_{SS}$
3.  $V_{OUT}$

### ■ EQUIVALENT CIRCUIT



### ■ DETECTION VOLTAGE RANK LIST

Device Name	$V_{DET}$	Device Name	$V_{DET}$
NJU7719U/U1-21	2.1V	NJU7719U/U1-34	3.4V
NJU7719U/U1-23	2.3V	NJU7719U/U1-39	3.9V
NJU7719U/U1-27	2.7V	NJU7719U/U1-42	4.2V
NJU7719U/U1-29	2.9V	NJU7719U/U1-45	4.5V
NJU7719U/U1-32	3.2V		

# NJU7719

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

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V <sub>DD</sub>	+10	V
Output Voltage	V <sub>OUT</sub>	V <sub>SS</sub> -0.3 ~ +10	V
Output Current	I <sub>OUT</sub>	50	mA
Power Dissipation	P <sub>D</sub>	350(*1)	mW
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +125	°C

(\*1): Device itself

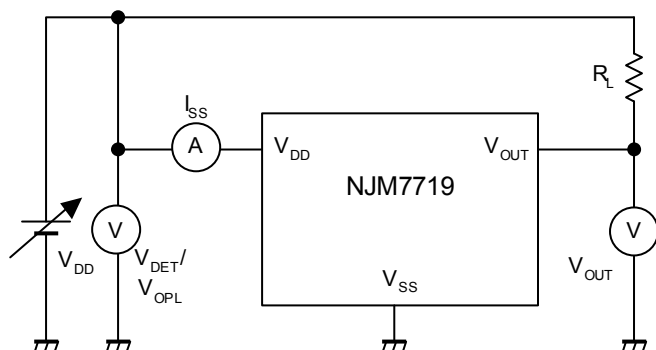
## ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Detection Voltage	V <sub>DET</sub>		-1.0%	—	+1.0%	V	
Hysteresis Voltage	V <sub>HYS</sub>		V <sub>DET</sub> ×0.03	V <sub>DET</sub> ×0.05	V <sub>DET</sub> ×0.08	V	
Quiescent Current	I <sub>SS</sub>	V <sub>DD</sub> =V <sub>DET</sub> +1V	V <sub>DET</sub> =1.3V~1.7V Version	—	0.5	1.0	μA
			V <sub>DET</sub> =1.8V~6.0V Version	—	0.8	1.6	μA
Output Current	I <sub>OUT</sub>	Nch, V <sub>DS</sub> =0.5V	V <sub>DD</sub> =1.2V	0.75	2.0	—	mA
			V <sub>DD</sub> =2.4V (≥2.7V Version)	4.5	7.0	—	mA
Output Leak Current	I <sub>LEAK</sub>	V <sub>DD</sub> =V <sub>OUT</sub> =9V	—	—	0.1	μA	
Detection Voltage Temperature Coefficient	ΔV <sub>DET</sub> /ΔTa	Ta=0 ~ +85°C	—	±100	—	ppm/°C	
Operating Voltage (*2)	V <sub>DD</sub>	R <sub>L</sub> =100kΩ	0.8	—	9	V	

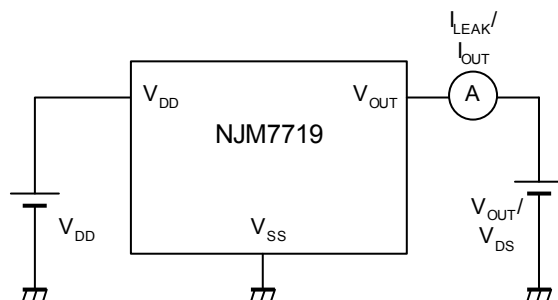
(\*2): The minimum Operating Voltage(V<sub>OPL</sub>) indicates the same value of the output voltage(V<sub>OUT</sub>) on condition that V<sub>OUT</sub> becomes 10% or less of the input voltage(V<sub>DD</sub>).

## ■ TEST CIRCUIT

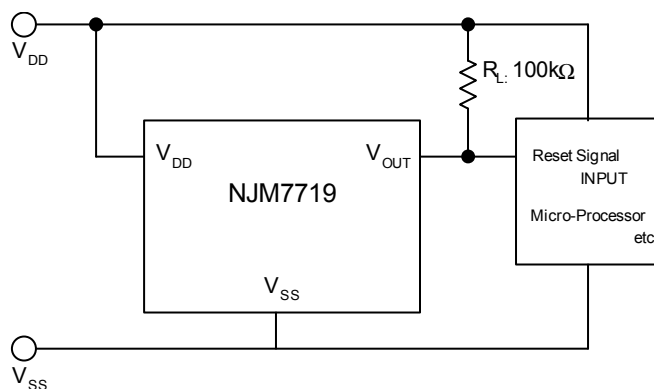
### ① COMMON TEST CIRCUIT



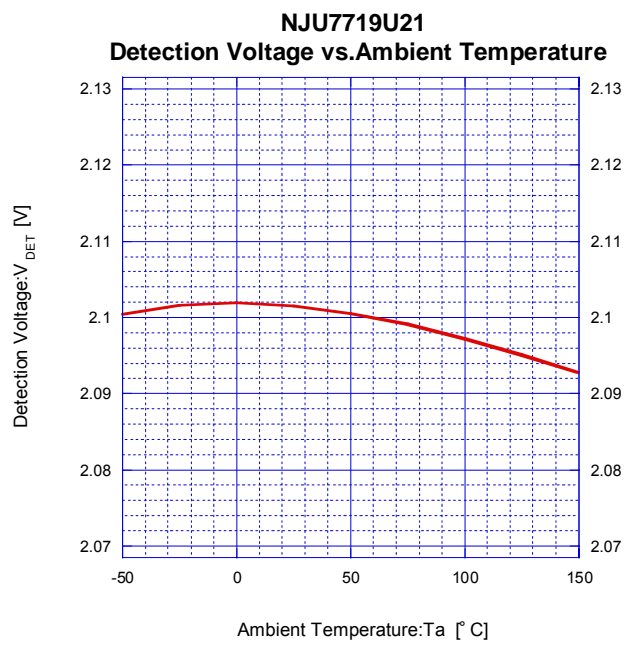
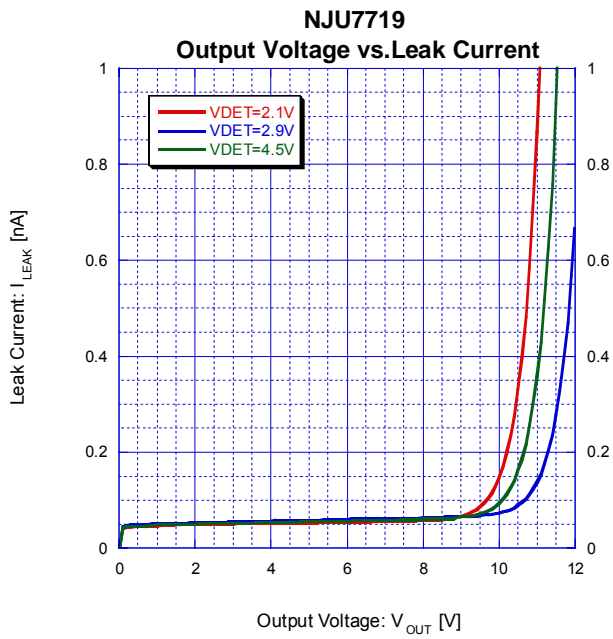
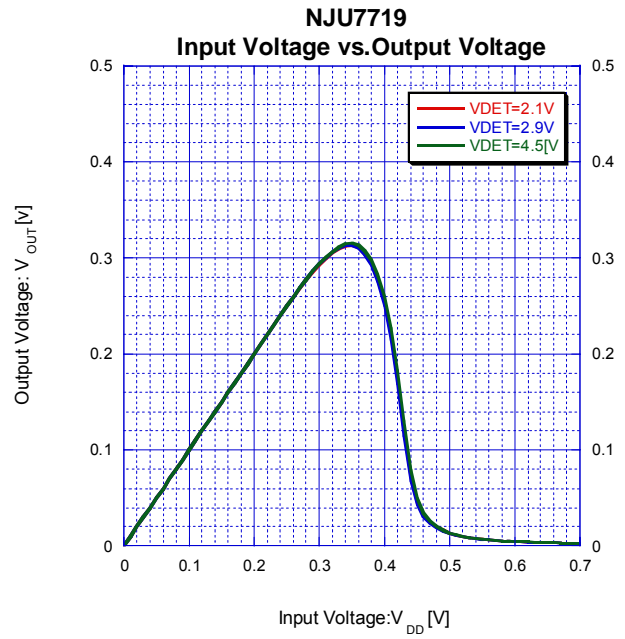
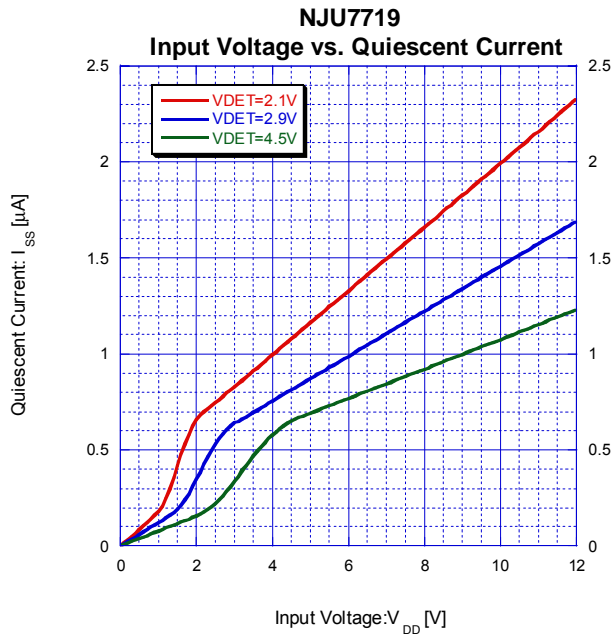
### ② Output Current/Output Leak Current TEST CIRCUIT



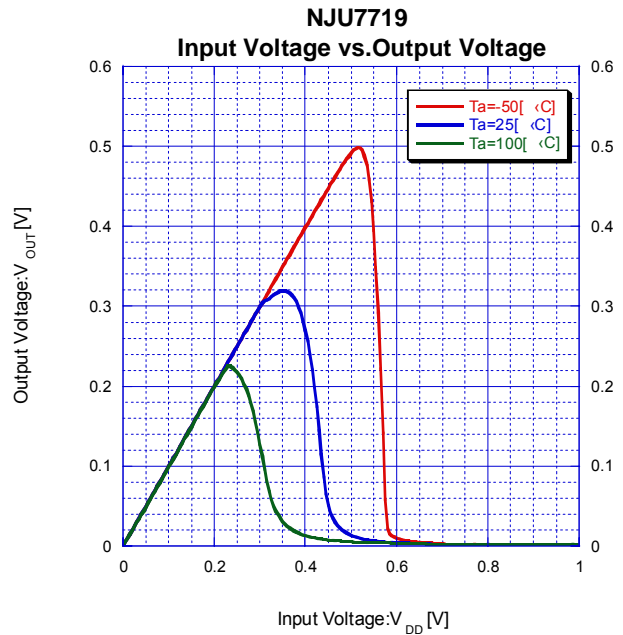
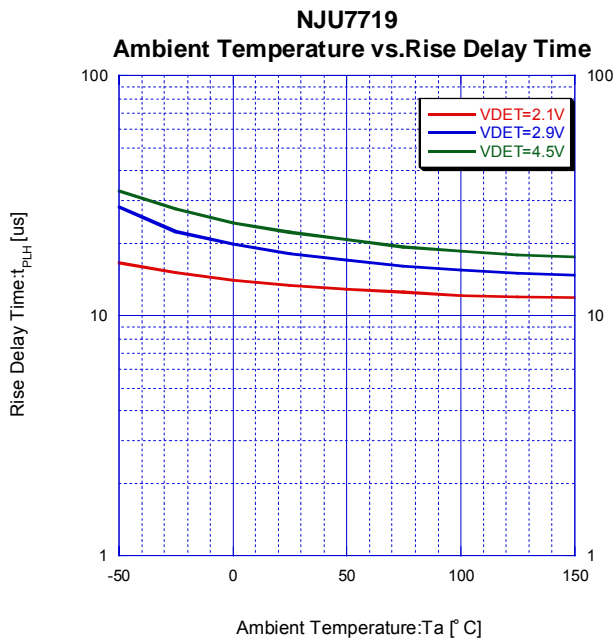
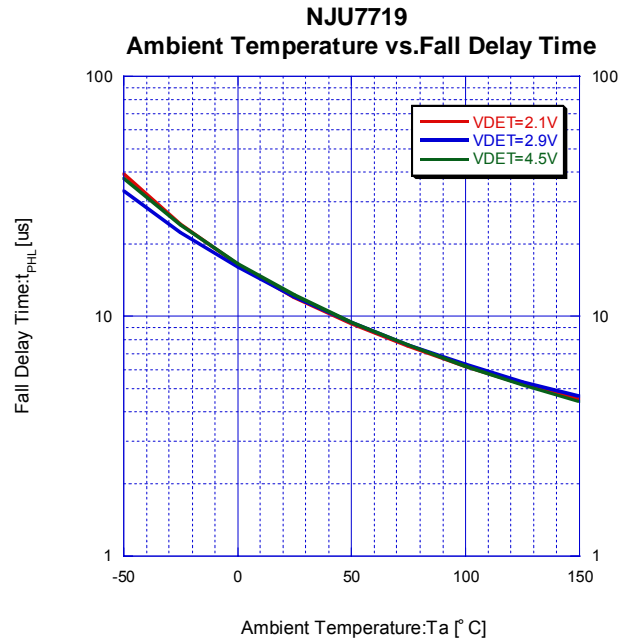
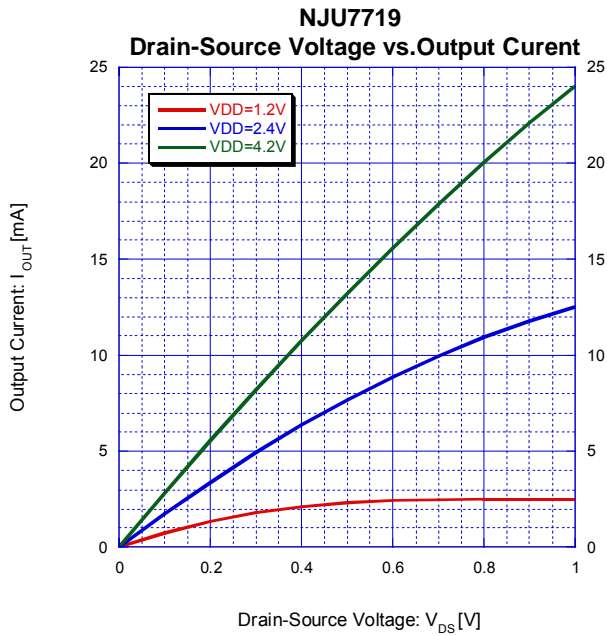
## ■ TYPICAL APPLICATION



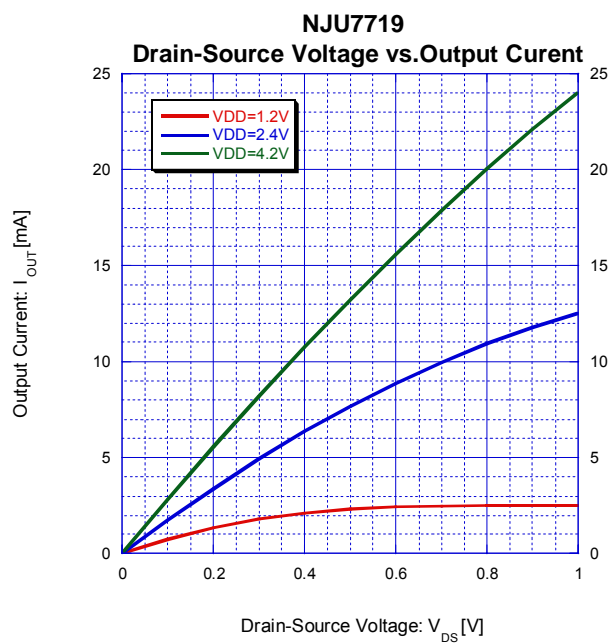
## ■ TYPICAL CHARACTERISTICS



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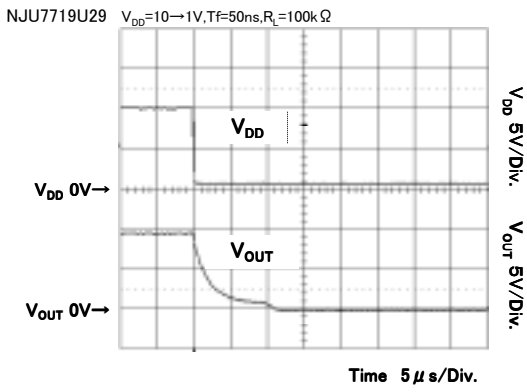


## ■ TYPICAL CHARACTERISTICS

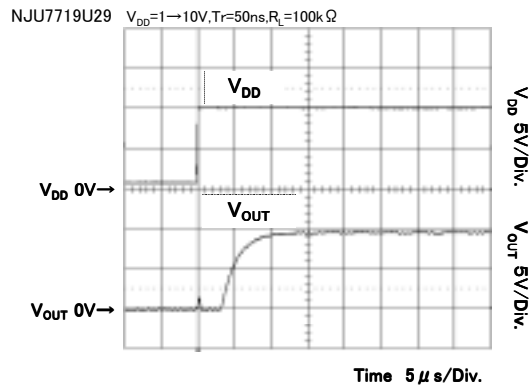


## ■ TYPICAL CHARACTERISTICS

Transient Response



Transient Response



**[CAUTION]**

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