



SANYO Semiconductors

DATA SHEET

TND721MH5

 — Excellent Power Device

IGBT Driver

Features

- Buffer type.
- Monolithic structure (Adoption of CMOS process).
- Allows simplified configuration of driver circuit.
- Compatible TTL / CMOS (Under $V_{IH}=2.0V$, at $V_{DD}=2.5$ to $5.5V$).

Specifications

Absolute Maximum Ratings at $T_a=25^\circ C$ (All voltage parameters are voltage referenced to GND)

Parameter	Symbol	Conditions	Ratings	Unit
Supply Voltage	V_{DD}		-0.3 to +7.5	V
Input Voltage	V_{IN}		-0.3 to $V_{DD}+0.3$	V
Output Voltage	V_{OUT}		-0.3 to $V_{DD}+0.3$	V
Allowable Power Dissipation	P_D	Mounted on a ceramic board (600mm ² ×0.8mm)	0.8	W
Junction Temperature	T_J		-55 to +150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Recommended Operating Conditions at $T_a=25^\circ C$ (All voltage parameters are voltage referenced to GND)

Parameter	Symbol	Conditions	Ratings	Unit
Supply Voltage	V_{DD}		2.5 to +5.5	V
Input Voltage	V_{IN}		0 to V_{DD}	V
Output Voltage	V_{OUT}		0 to V_{DD}	V
Operating Temperature	T_{opr}		-40 to +85	°C

Electrical Characteristics (AC) at $T_a=25^\circ C$, $V_{IN}=2.5V$ to V_{DD} , $C_L=5000pF$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Rise Time	t_r	$V_{DD}=5V$		500	1000	ns
		$V_{DD}=2.5V$		1200	2000	ns
Turn-OFF Fall Time	t_f	$V_{DD}=5V$		500	1000	ns
		$V_{DD}=2.5V$		1400	2000	ns
Turn-ON Delay Time	$t_{d(on)}$	$V_{DD}=5V$		150	500	ns
		$V_{DD}=2.5V$		300	1000	ns
Turn-OFF Delay Time	$t_{d(off)}$	$V_{DD}=5V$		500	1000	ns
		$V_{DD}=2.5V$		1200	2000	ns

Marking : XL

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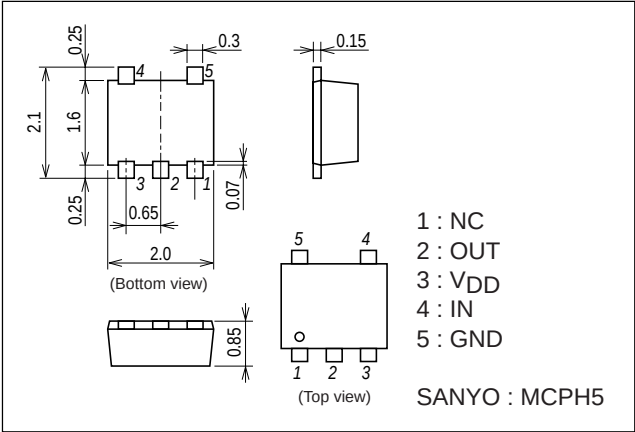
Electrical Characteristics (DC) at Ta=25°C, VDD=2.5V to 5.5V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input High Level Voltage	V _{IH}		2.0			V
Input Low Level Voltage	V _{IL}				1.0	V
Input High Level Leak Current	I _{IN+}	V _{IN} =V _{DD}			100	μA
Input Low Level Leak Current	I _{IN-}	V _{IN} =0			1	μA
Standby Supply Current	I _{DD}	V _{IN} =0 or V _{DD}			500	μA
Output "H" Load Short Circuit Pulsed Current	I _{O+}	V _{DD} =5V, V _{OUT} =0, C _L =5000pF		50		mA
		V _{DD} =2.5V, V _{OUT} =0, C _L =5000pF		10		mA
Output "L" Load Short Circuit Pulsed Current	I _{O-}	V _{DD} =5V, V _{OUT} =V _{DD} , C _L =5000pF		50		mA
		V _{DD} =2.5V, V _{OUT} =V _{DD} , C _L =5000pF		10		mA

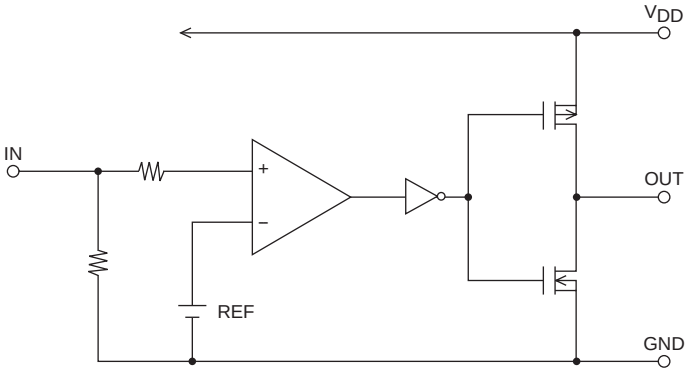
Package Dimensions

unit : mm

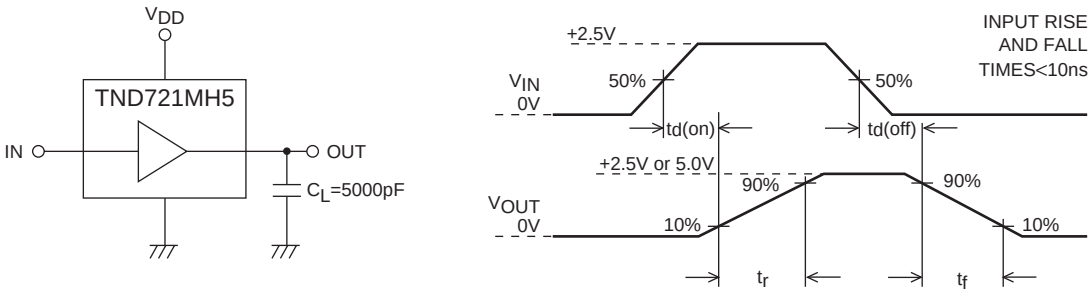
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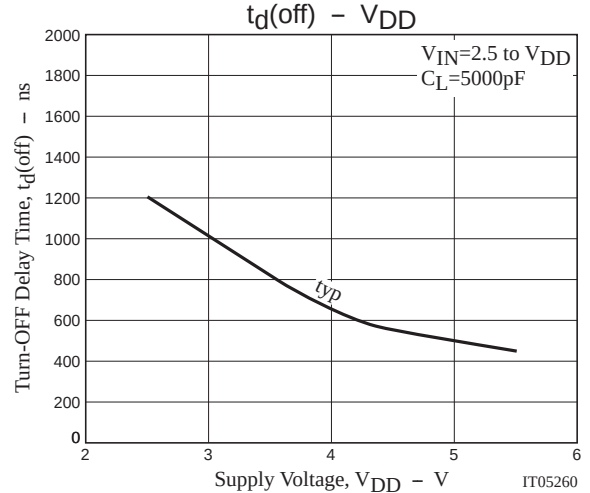
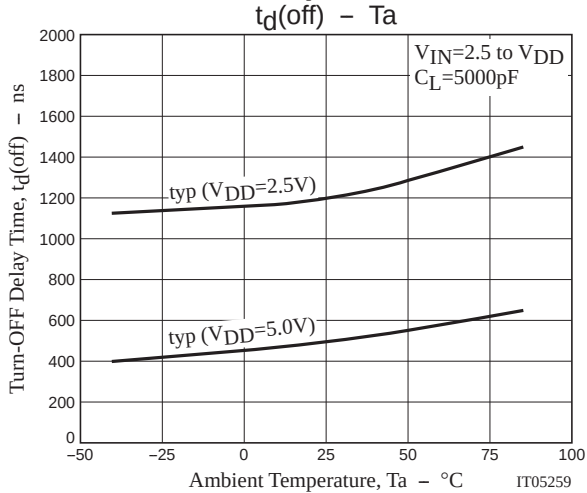
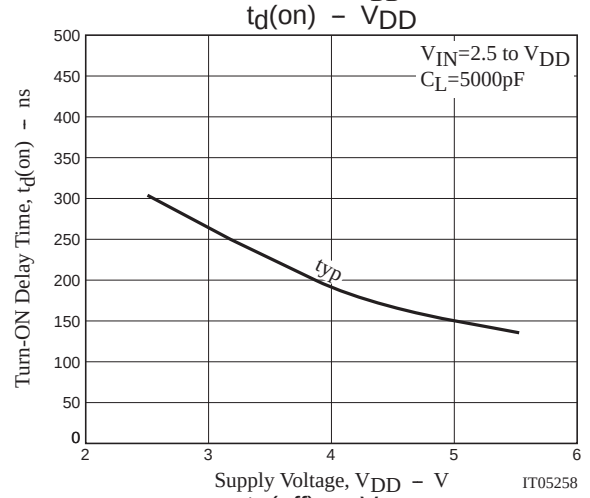
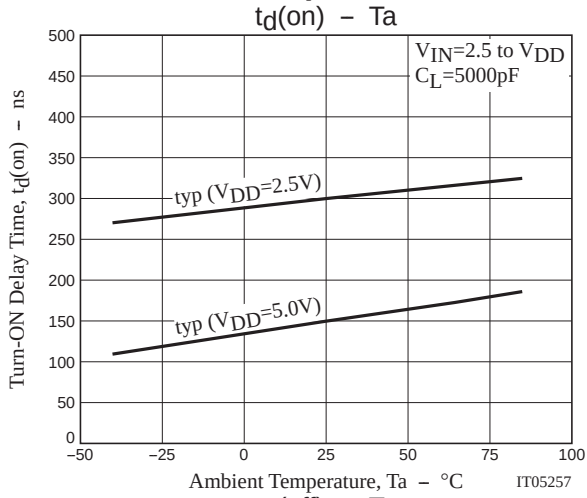
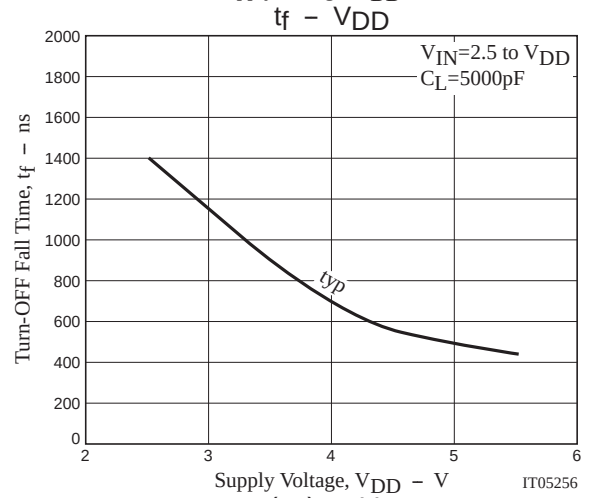
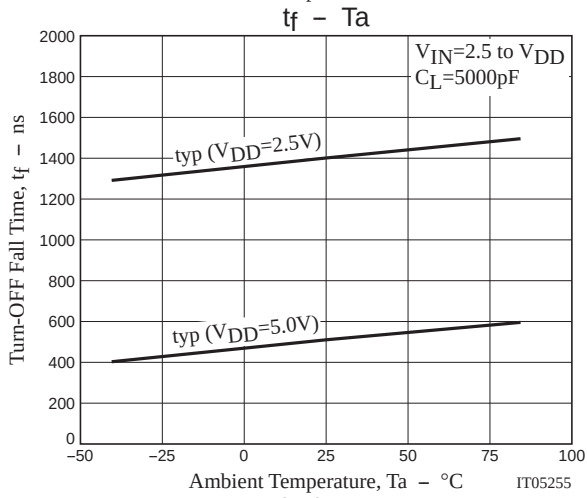
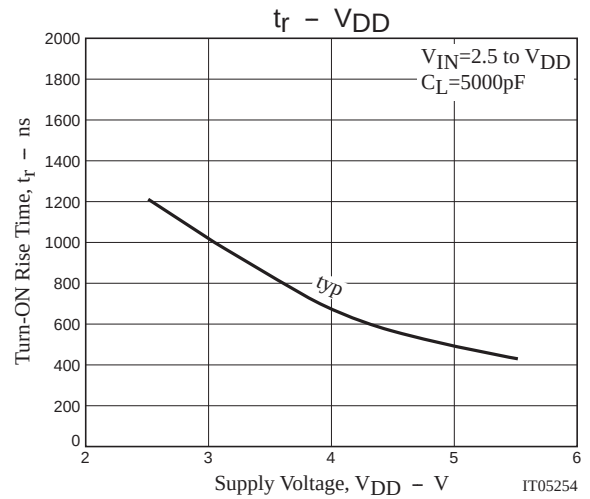
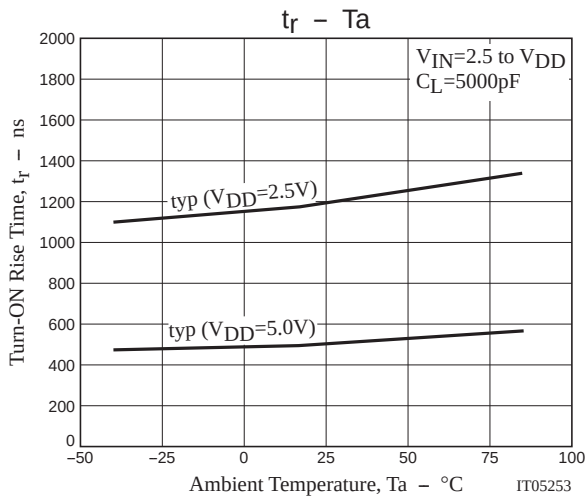
Block Diagram



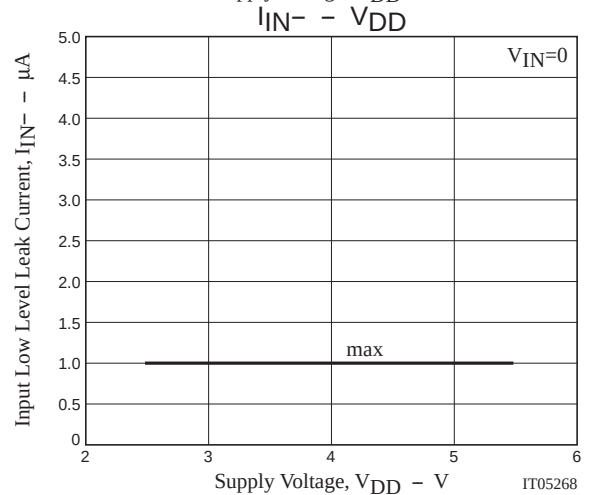
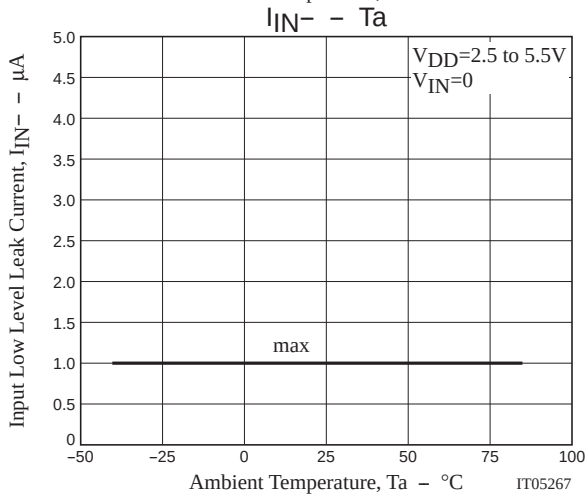
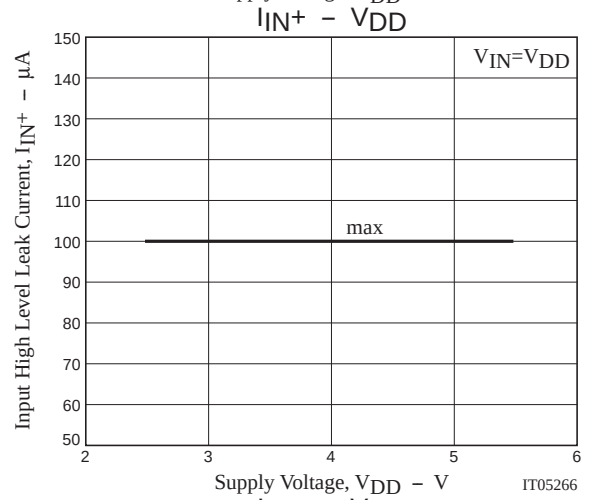
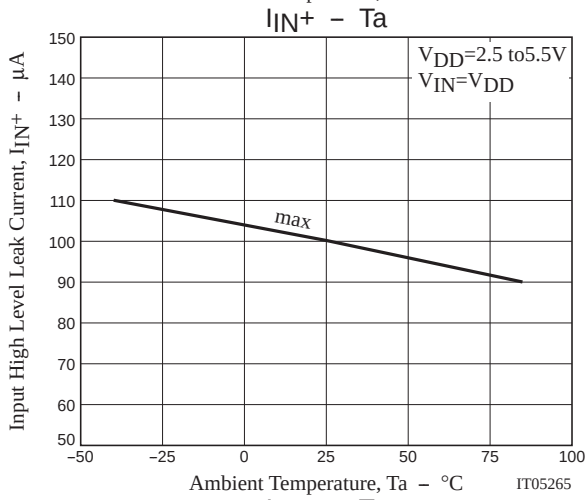
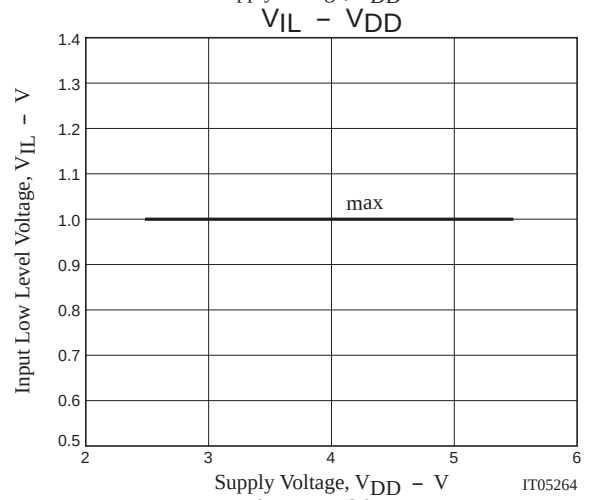
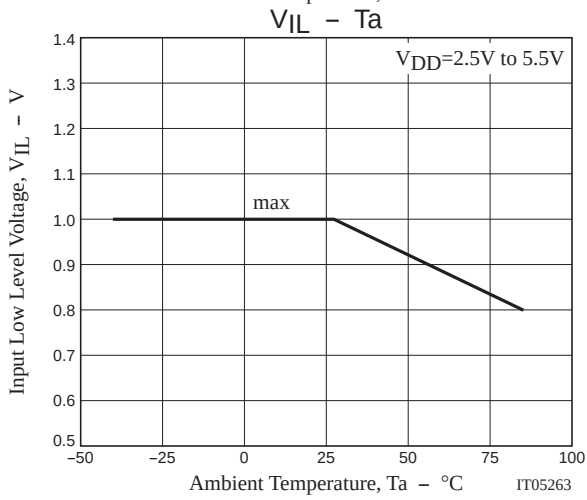
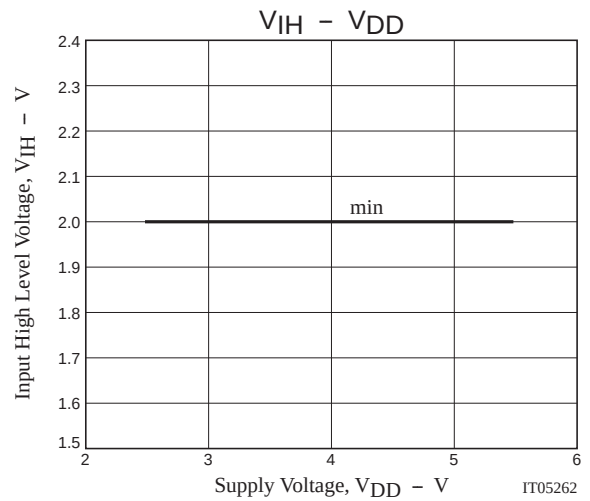
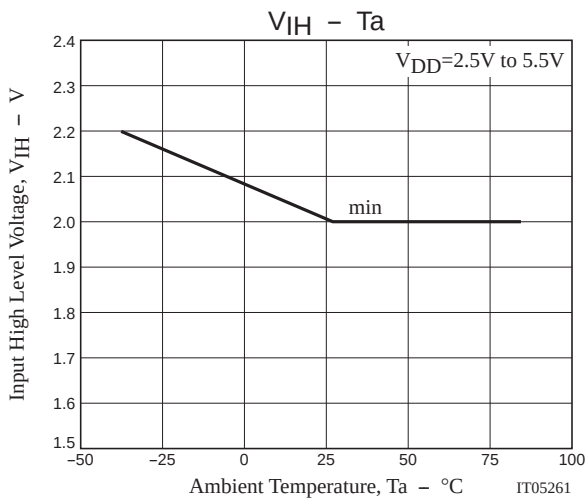
Switching Time Waveform Definition



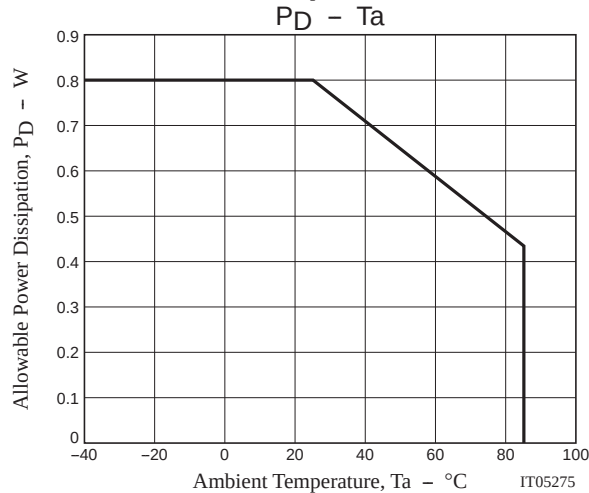
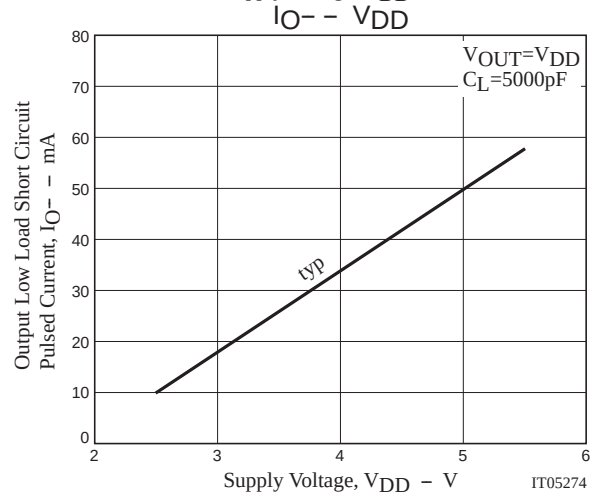
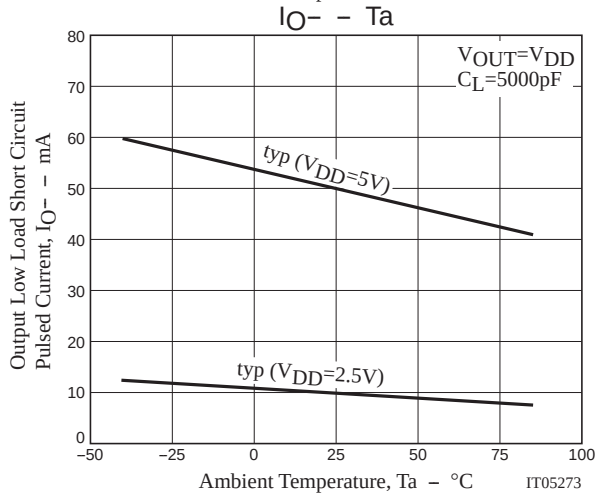
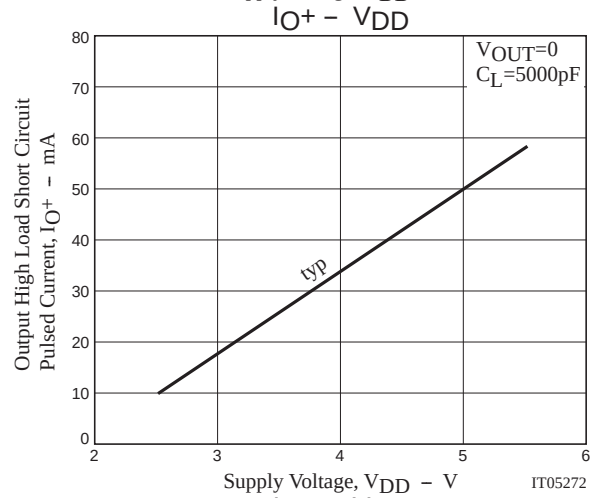
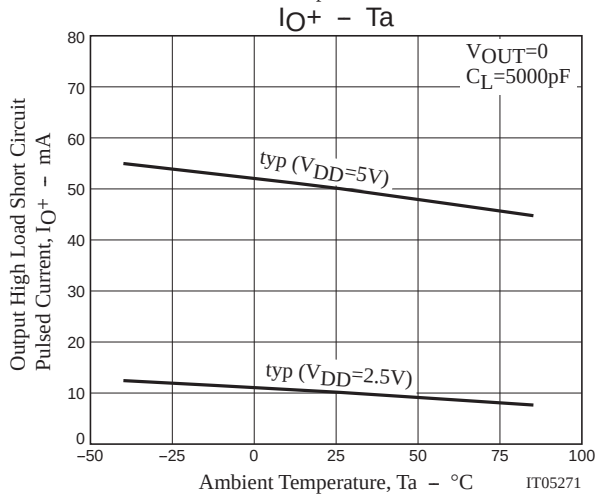
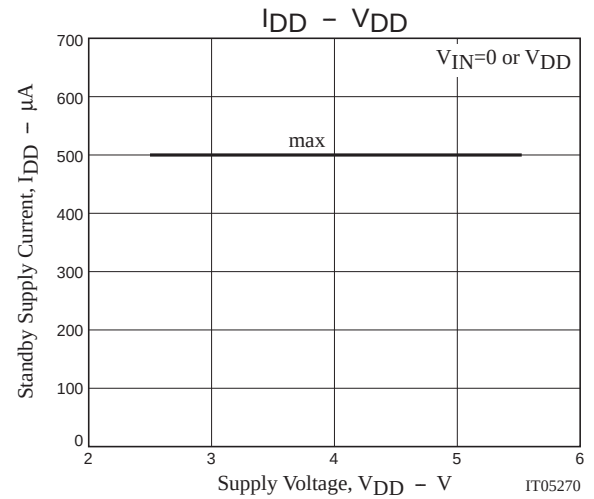
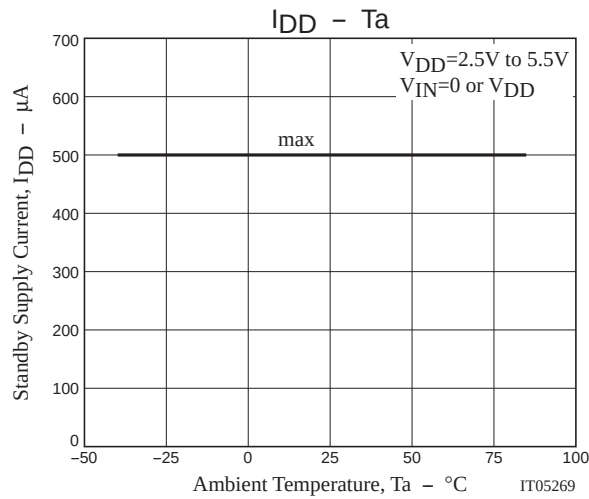
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