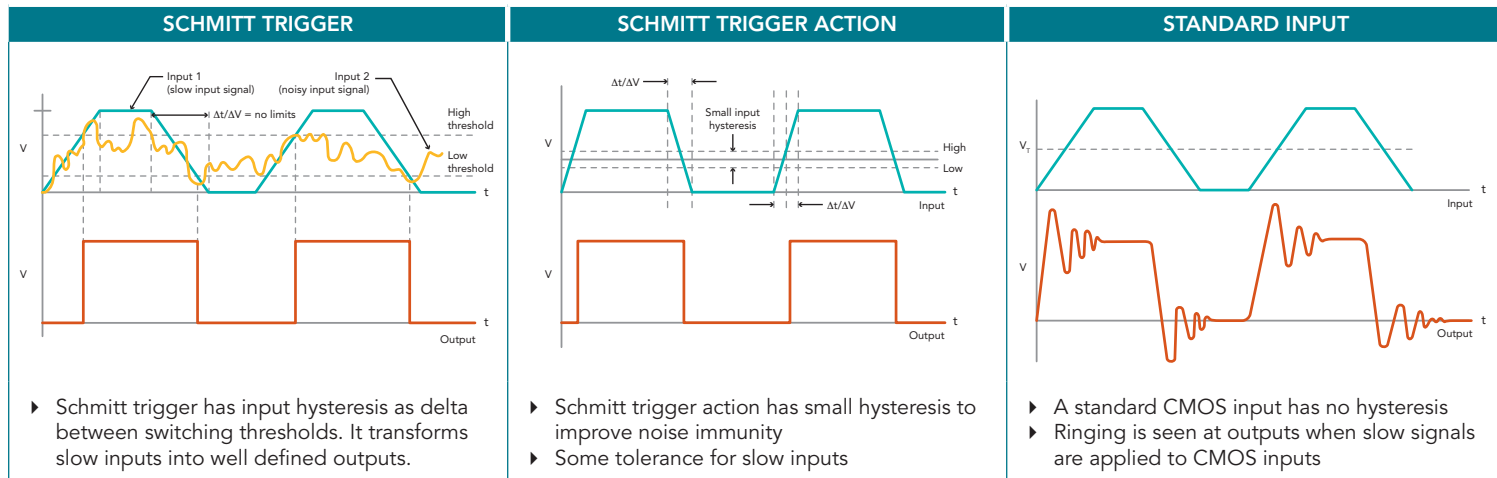


CLEAN OUTPUTS FOR SLOW INPUTS — SCHMITT TRIGGERS



FEATURES

- Availability in multiple logic families and wide range of supply voltages
- Can accept very slow input rising and falling edges
- Optional voltage translation for slow inputs

BENEFITS

- Change a sine wave to square wave
- Improved noise immunity including switching noise
- Convert the slow edges to fast edges



Schmitt trigger symbol with non-inverting hysteresis



SCHMITT TRIGGERS PORTFOLIO

Family	AXP	AUP	LV	LVC	ALVC	LVT	HC(T)	AHC(T)	VHC(T)	HEF	XC7
Supply voltage (V)	0.7 to 2.75	0.8 to 3.6	1 to 3.6	1.2 to 3.6; 1.65 to 5.5 ⁽⁴⁾	1.2 to 3.6	2.7 to 3.6	2 to 6	2 to 5.5	2 to 5.5	3 to 15	2 to 5.5
Propagation delay, typ (ns)	3	4	9	2	2	2	9	5	5	60	5
Output drive (mA)	±8	±4	±8	±24	±24	-0.5	±8	±8	±8	±3	±8
Standby current (µA)	0.6	0.9	20	20	40	120	80	40	40	600	40
Temperature range (°C) ⁽⁵⁾	B	A	A	A	B	B	A	A	A	B	A
Automotive grade		•	•	•		•	•	•	•	•	•
Functions											
Hex inverter Schmitt trigger			•		•	•	•	•	•	•	
Dual inverting Schmitt trigger				•			•				
Dual non-inverting Schmitt trigger				•			•				
Hex non-inverting precision Schmitt trigger							•				
Quad 2-input NAND Schmitt trigger			•	•			•	•		•	
Single inverting Schmitt trigger	•	•					•	•			•
Single nonInverting Schmitt trigger	•	•									
2-input NAND gate		•									
Triple inverting Schmitt trigger							•	•			•
Triple non-inverting Schmitt trigger				•							
Nine wide Schmitt trigger buffer; open drain outputs							•				
Nine wide Schmitt trigger buffer; open drain outputs inverting							•				
Octal Schmitt trigger buffer/line driver; 3-state							•				
Octal Schmitt trigger buffer/line driver; 3-state, inverting							•				
Features											
Open drain outputs							•				
TTL inputs							•	•	•		•
Overvoltage tolerant inputs to 5V				•			•	•	•		•
Overvoltage tolerant inputs to 3V	•	•		•	•						
Low threshold inputs		•									
Power off leakage (ioff) circuitry	•	•		•		•					
Input clamping diodes			•								
Configurable Logic	•	•		•							

NOTES: 1. All AXP, AUP, and LVC Mini Logic functions have Schmitt trigger action at inputs. 2. Only gates in standard ALVC logic have Schmitt trigger action at inputs. 3. Schmitt trigger action has small hysteresis to improve noise immunity. ⁽⁴⁾ For Mini Logic functions. ⁽⁵⁾ A = -40 °C to +125 °C; B = -40 °C to +85 °C.

For complete list of functions and packages please visit: www.nxp.com/products/discretes-and-logic/logic/schmitt-triggers:MC_29503