

Automotive-qualified logic in space-saving MicroPak packages

As the leader in Mini Logic for Automotive, Nexperia is addressing space constraints in automotive applications with innovative MicroPak solutions that exceed AEC-Q100 requirements. Our Q100 portfolio now includes more than 20 Automotive-qualified functions in XSON leadless extremely-thin small-outline packages.



Single-gate and dual-gate functions in LVC (1.65 V to 5.5 V), AUP (0.8 V to 3.6 V) and AVC (1.2 V to 3.6 V) technologies are now available in our Automotive-ready XSON6 and XSON8 packages.

Functions include buffers/inverters, gates, translators, Schmitt-triggers, transceivers and more. Nexperia can support the release of additional logic functions in selected technologies, expanding its MicroPak Q100 portfolio on request.

Within our XSON package family, the 6-pad XSON6 (SOT886 & SOT1202), as well as the 8-pad XSON8 (SOT833-1 & SOT1203), can save up to ~60% PCB space against equivalent leaded packages, for slimmer and more compact automotive designs. As leadless packages, these all offer a high pad size-to-package footprint ratio for a reliable bond to the board and help simplify the overall layout.

Key features

- › Smallest Automotive-qualified logic
- › 6-pad & 8-pad options (0.5 or 0.35mm pitch)
- › Low package profile height (0.5 or 0.35mm)
- › Fully specified from -40 to 125°C
- › RoHS and dark green compliant

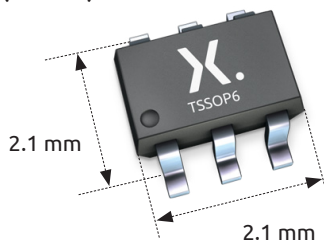
Key benefits

- › Significant space savings
- › Reliable bond -no bent leads
- › Same silicon die as PicoGate
- › Simplified board layout
- › Low power consumption

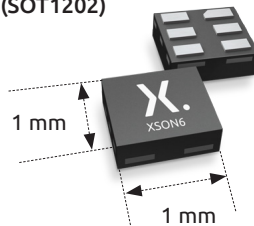
Applications

- › Automotive space-constrained applications
- › On-board infotainment
- › Instrument cluster & ADAS
- › Body control modules (BCM)
- › Battery management systems (BMS)

TSSOP6
(SOT363)



XSON6
(SOT1202)



60%
Size reduction

nexperia

EFFICIENCY WINS.

Packages

Our Automotive-qualified MicroPak packages feature the same silicon die as larger PicoGate options, ensuring that electrical performance remains identical to leaded equivalents. Both XSON6 and XSON8 packages provide a choice between 0.5mm and 0.35mm pitch/height, offering maximal flexibility in designs.

Package name	Package version	L (mm)	W (mm)	H (mm)	P (mm)	Suffix
XSON6	SOT886 	1.45	1.00	0.50	0.50	GM
	SOT1202 	1.00	1.00	0.35	0.35	GS
XSON8	SOT833-1 	1.95	1.00	0.50	0.50	GT
	SOT1203 	1.35	1.00	0.35	0.35	GS

Available types

Type	Description	XSON6 (GM)	XSON6 (GS)	XSON8 (GT)	XSON8 (GS)
74AUP1G08-Q100	Low-power 2-input AND gate	•			
74AUP1G125-Q100	Low-power buffer/line driver; 3-state	•	•		
74AUP1G157-Q100	Low-power 2-input multiplexer	•			
74AUP1G32-Q100	Low-power 2-input OR-gate	•			
74AUP1T34-Q100	Low-power dual supply translating buffer	•			
74AUP2GU04-Q100	Low-power dual unbuffered inverter	•			
74AVC1T45-Q100	Dual-supply voltage level translator/transceiver; 3-state	•	•		
74AVC2T45-Q100	Dual-bit dual-supply translating transceiver; 3-state			•	
74LVC1G07-Q100	Single buffer with open-drain output		•		
74LVC1G08-Q100	Single 2-input AND gate	•			
74LVC1G125-Q100	Single buffer/line driver; 3-state	•			
74LVC1G14-Q100	Single Schmitt-trigger inverter	•			
74LVC1G17-Q100	Single Schmitt trigger buffer	•			
74LVC1G3157-Q100	2-channel analog multiplexer/demultiplexer	•			
74LVC1G32-Q100	Single 2-input OR gate	•			
74LVC1G74-Q100	Single D-type flip-flop with set and reset; positive edge trigger			•	
74LVC1T45-Q100	Dual-supply voltage level translator/transceiver; 3-state	•			
74LVC2G04-Q100	Dual inverter		•		
74LVC2G08-Q100	Dual 2-input AND gate				•
74LVC2G14-Q100	Dual inverting Schmitt trigger with 5 V tolerant input	•			
74LVC2G34-Q100	Dual buffer gate	•			
74LVC2GU04-Q100	Dual inverter	•			
74LVC2T45-Q100	Dual supply translating transceiver; 3-state			•	•

Any types released in SOT886 can be released in SOT1202 and vice-versa. The same possibility applies to SOT833-1 and SOT1203. Additional functions can also be released upon request.

For more information and to browse our MicroPak portfolio, visit:
nexperia.com/products/logic/family/MICROPAK

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Date of release:
April 2019