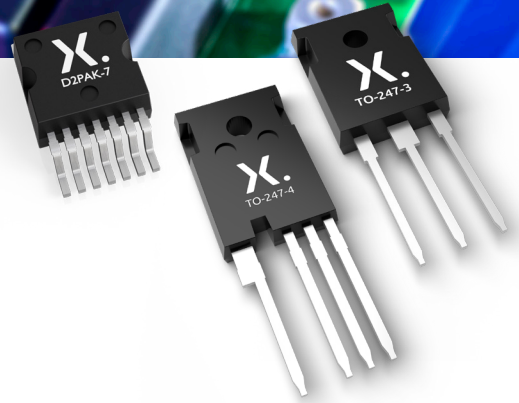


For industrial applications

Silicon Carbide MOSFETs

Addressing the growing demand for high-power and high-voltage industrial applications, Nexperia's Silicon Carbide MOSFETs, with their excellent $R_{DS(on)}$ temperature stability, fast switching speed, and high short-circuit ruggedness, make them the product of choice for E-vehicle charging infrastructure, photovoltaic inverters, and motor drives.



Design Benefits

- › Very low switching losses
- › Fast reverse recovery
- › Fast switching speed
- › Temperature independent turn-off switching losses
- › Very fast and robust intrinsic body diode
- › Faster commutation and improved switching due to the additional Kelvin source pin

Key technical features

- › Best-in-class $R_{DS(on)}$ temperature stability
- › Superior gate charge and beneficial gate charge ratio
 - Low power consumption of gate drivers
 - High tolerance against parasitic turn-on
- › Ultra small threshold voltage tolerance
- › Robust body diode with very low forward voltage
- › Lower leakage current up to 1200 V

Key applications

- › E-vehicle charging infrastructure
- › Photovoltaic inverters
- › Switch mode power supply
- › Uninterruptable power supply
- › Motor drives



- › Datasheets
- › Application notes
- › News
- › Videos and more

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EFFICIENCY WINS.

Product range

Type name	Package	V_{DS} max (V)	R_{DSon} typ (m Ω) @ $T_j = 25^\circ\text{C}$	I_D max (A) @ $T_C = 25^\circ\text{C}$	T_j max ($^\circ\text{C}$)
NSF030120L3A0	 TO-247-3	1200	30	67	175
NSF040120L3A0			40	65	
NSF060120L3A0			60	38	
NSF080120L3A0			80	35	
NSF030120L4A0	 TO-247-4		30	67	
NSF040120L4A0			40	65	
NSF060120L4A0			60	38	
NSF080120L4A0			80	35	
NSF030120D7A0	 TO-263-7		30	67	
NSF040120D7A0			40	65	
NSF060120D7A0			60	38	
NSF080120D7A0			80	33	

SiC FET | Nomenclature

NSF 040 120 L3 AO -Q

NEXPERIA
Silicon carbide
FET

R_{DSon}

020	20 m Ω
040	40 m Ω
080	80 m Ω
160	160 m Ω

Max. reverse voltage

120 1200 V

Qualification scheme

Standard
-Q Automotive

Version indicator

Package indicator

L3	TO-247-3
L4	TO-247-4
D7	D2PAK-7
Tn	TopCool
Bn	Bare die

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