



Small signal and small power MOSFETs

Selection guide 2024-2025

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Small signal/small power MOSFETs -250 to 600 V

Combining latest high-performance silicon technology with small and innovative packaging

Small signal/small power products are ideally suited for space-constrained automotive and non-automotive applications. With an optimal price/performance ratio and small footprint packages, Infineon's Small signal and small power MOSFETs are the best fit for a wide range of applications and circuits. These include low-voltage drives, linear battery charger, battery protection, load switches, DC-DC converters, reverse polarity protection and many more.

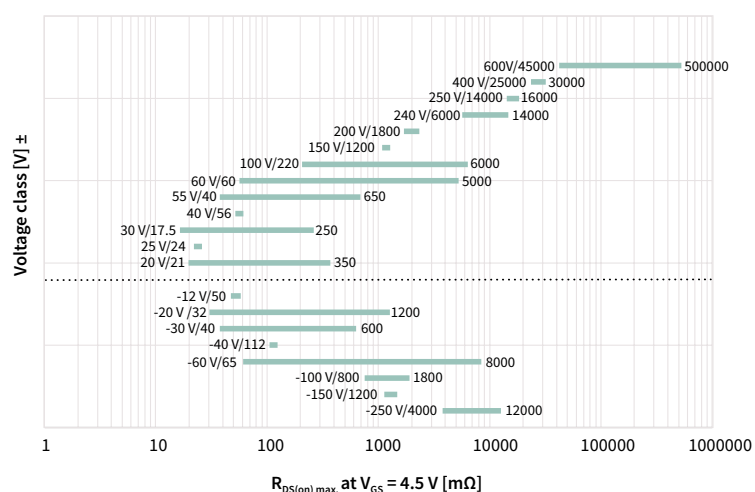
The entire family includes different packages:

SOT-223, SOT-23, SOT-323, SOT-363, SOT-89, TSOP-6, and SC59

The product portfolio covers N-channel and P-channel enhancement mode MOSFETs as well as N-channel depletion mode products:

- -250 to -12 V P-channel enhancement mode (available in single and dual configurations)
- 20 to 600 V N-channel enhancement mode (available in single and dual configurations)
- -20/+20 V and -30/+30 V complementary (P + N channel) enhancement mode
- 60 to 600 V N-channel depletion mode

Key features	Key benefits
– Products available in Automotive, Industrial, and Standard qualification levels	– Suitable for automotive and high quality demanding applications
– Four $V_{GS(th)}$ classes available for 1.8 V, 2.5 V, 4.5 V, and 10 V gate drives	– Easy interface to MCU
– ESD protected P-channel parts	– Reduction of design complexity
– V_{DS} range from -250 to 600 V	– Wide selection of products available
– RoHS compliant and halogen free	– Environmentally friendly



Small signal/small power MOSFETs are available in seven industry-standard package types ranging from the largest SOT-223 to the smallest SOT-323.

Products are offered in single, dual and complementary configurations and are suitable for a wide range of applications, including battery protection, LED lighting, low-voltage drives, and DC-DC converters.

SOT-363	SOT-323	SOT-23	TSOP-6	SC59	SOT-89	SOT-223



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Small signal/small power N-channel



Voltage [V]		SOT-223	TSOP-6	SOT-89	SC59	SOT-23	SOT-323	SOT-363
N-channel	20 V		BSL202SN ⁴⁾ 36 mΩ, 7.5 A, SLL		BSR802N ⁵⁾ 32 mΩ, 3.7 A, ULL	IRLML6244 ^{1) 4)} 27 mΩ, 6.3 A, SLL	BSS816NW ⁵⁾ 240 mΩ, 1.4 A, ULL	BSD214SN ⁴⁾ 250 mΩ, 1.5 A, SLL
			IRLMS2002 ^{1) 4)} 45 mΩ, 6.5 A, SLL		BSR202N ⁴⁾ 33 mΩ, 3.8 A, SLL	IRLML6246 ^{1) 4)} 66 mΩ, 4.1 A, SLL	BSS214NW ⁴⁾ 250 mΩ, 1.5 A, SLL	BSD840N ⁵⁾ 560 mΩ, 0.88 A, ULL, dual
			BSL806N ⁵⁾ 82 mΩ, 2.3 A, ULL, dual			IRLML2502 ^{1) 4)} 80 mΩ, 4.2 A, SLL		BSD235N ⁴⁾ 600 mΩ, 0.95 A, SLL, dual
						BSS806N ⁵⁾ 82 mΩ, 2.3 A, ULL		
						BSS806NE ⁵⁾ 82 mΩ, 2.3 A, ULL, ESD		
						BSS205N ⁴⁾ 85 mΩ, 2.5 A, SLL		
						BSS214N ⁴⁾ 250 mΩ, 1.5 A, SLL		
	25 V					IRFML8244 ^{1) 3)} 41 mΩ, 5.8 A, LL		
	30 V		IRLTS6342 ^{1) 4)} 22 mΩ, 8.3 A, SLL			IRLML6344 ^{1) 4)} 37 mΩ, 5.0 A, SLL		BSD316SN ³⁾ 280 mΩ, 1.4 A, LL
			IRFTS8342 ^{1) 3)} 29 mΩ, 8.2 A, LL			IRLML0030 ^{1) 3)} 40 mΩ, 5.3 A, LL		
			IRLMS1503 ^{1) 3)} 200 mΩ, 3.2 A, LL			IRLML6346 ^{1) 4)} 80 mΩ, 3.4 A, SLL		
						BSS306N ³⁾ 93 mΩ, 2.3 A, LL		
						IRLML2030 ^{1) 3)} 154 mΩ, 2.7 A, LL		
						BSS316N ³⁾ 280 mΩ, 1.4 A, LL		
						IRLML2803 ³⁾ 400 mΩ, 1.2 A, LL		
	40 V					IRLML0040 ^{1) 3)} 78 mΩ, 3.6 A, LL		
	55 V	IRFL024Z ^{1) 2)} 57.5 mΩ, 5.1 A, NL				BSS670S2L ³⁾ 825 mΩ, 0.54 A, LL		
		IRLL2705 ^{1) 3)} 65 mΩ, 3.8 A, LL						
		IRFL4105 ^{1) 2)} 45 mΩ, 3.7 A, NL						
		IRLL024N ^{1) 3)} 100 mΩ, 3.5 A, LL						
		IRLL014N ^{1) 3)} 280 mΩ, 2.0 A, LL						
		IRFL014N ^{1) 2)} 160 mΩ, 1.9 A, NL						
	60 V	BSP295 ³⁾ 500 mΩ, 1.8 A, LL	BSL606SN ³⁾ 95 mΩ, 4.5 A, LL	BSS606N ³⁾ 90 mΩ, 3.2 A, LL		IRLML0060 ^{1) 3)} 116 mΩ, 2.7 A, LL	BSS138W ³⁾ 4 Ω, 0.28 A, LL	2N7002DW ³⁾ 4 Ω, 0.3 A, LL, dual
						IRLML2060 ^{1) 3)} 640 mΩ, 1.2 A, LL	SN7002W ³⁾ 7.5 Ω, 0.23 A, LL	
						2N7002 ^{1) 3)} 4 Ω, 0.3 A, LL		
						BSS138I ^{1) 3)} 4 Ω, 0.23 A, LL		
						BSS138N ³⁾ 4 Ω, 0.23 A, LL		
						SN7002I ^{1) 3)} 7.5 Ω, 0.2 A, LL		
						SN7002N ³⁾ 7.5 Ω, 0.2 A, LL		
	100 V	IRFL4310 ^{1) 2)} 200 mΩ, 1.6 A, NL				BSS159N ⁶⁾ 8 Ω, 0.13 A, depletion		
		BSP373N ²⁾ 240 mΩ, 1.8 A, NL				IRLML0100 235 mΩ, 1.6 A, LL		
		BSP372N ³⁾ 270 mΩ, 1.8 A, LL				BSS119N ³⁾ 10 Ω, 0.19 A, LL		
		BSP296N ³⁾ 800 mΩ, 1.2 A, LL				BSS123I ^{1) 3)} 10 Ω 0.19 A, LL		
						BSS123N ³⁾ 10 Ω 0.19 A, LL		
						BSS169I ^{1) 6)} 12 Ω, 0.09 A, depletion		
						BSS169 ⁶⁾ 12 Ω, 0.09 A, depletion		
	150 V	IRFL4315 ^{1) 2)} 185 mΩ, 2.6 A, NL	IRF5802 ^{1) 2)} 1.2 Ω, 0.9 A, NL					
	200 V	BSP297 ³⁾ 3 Ω, 0.66 A, LL	IRF5801 ^{1) 2)} 2.2Ω, 0.6 A, NL					
		BSP149 ⁶⁾ 3.5 Ω, 0.14 A, LL, depletion						
	240 V	BSP88 ³⁾ 7.5 Ω, 0.35 A, SLL		BSS87 ³⁾ 7.5 Ω, 0.26 A, LL		BSS131 ³⁾ 20 Ω, 0.11 A, LL		
		BSP89 ³⁾ 7.5 Ω, 0.35 A, LL						
		BSP129 ⁶⁾ 20 Ω, 0.05 A, LL, depletion						
	250 V					BSS139I ^{1) 6)} 30 Ω, 0.10 A, LL, depletion		
						BSS139 ⁶⁾ 30 Ω, 0.10 A, LL, depletion		
	400 V	BSP324 ³⁾ 22 Ω, 0.17 A, LL						
	600 V	BSP125 ³⁾ 60 Ω, 0.12 A, LL		BSS225 ³⁾ 45 Ω, 0.09 A, LL		BSS127I ^{1) 3)} 600 Ω, 0.021 A, LL		
		BSP135I ^{1) 6)} 60 Ω, 0.02 A, LL, depletion				BSS127 ³⁾ 600 Ω, 0.021 A, LL		
		BSP135 ⁶⁾ 60 Ω, 0.02 A, LL, depletion				BSS126I ^{1) 6)} 700 Ω, 0.021 A, LL, depletion		
						BSS126 ⁶⁾ 700 Ω, 0.021 A, LL, depletion		



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1) not qualified to Automotive AEC-Q101
2) R_{DS(on)} specified at 10 V

3) R_{DS(on)} specified at 4.5 V
4) R_{DS(on)} specified at 2.5 V

5) R_{DS(on)} specified at 1.8 V
6) R_{DS(on)} specified at 0 V

Small signal/small power P-channel



Voltage [V]		SOT-223	TSOP-6	SOT-89	SC59	SOT-23	SOT-323	SOT-363
P-channel MOSFETs	-250 V	BSP317P ³⁾ 5 Ω, -0.43 A, LL		BSS192P ³⁾ 15 Ω, -0.19 A, LL	BSR92P ³⁾ 13 Ω, -0.14 A, LL			
		BSP92P ³⁾ 15 Ω, -0.26 A, LL						
	-150 V	ISP14EP15LM ^{1) 3)} 1.4 Ω, -1.29 A, LL						
	-100 V	ISP16DP10LMA 167 mΩ, 2.2 A, LL			BSR316P ³⁾ 2.2 Ω, -0.36 A, LL			
		BSP322P ³⁾ 1 Ω, -1.0 A, LL						
		BSP316P ³⁾ 2.3 Ω, -0.68 A, LL						
		ISP16DP10LM ^{1) 3)} 190 mΩ, -3.9 A, LL						
		ISP98DP10LM ^{1) 3)} 1.05 Ω, -1.55 A, LL						
		ISP20EP10LM ^{1) 3)} 2.2 Ω, -0.99 A, LL						
	-60 V	ISP650P06NMS ^{1) 2)} 65 mΩ, -3.7 A, NL			BSR315P ³⁾ 1.3 Ω, -0.62 A, LL	ISS17EP06LM ^{1) 3)} 2.2 Ω, -0.3 A, LL	BSS84PW ³⁾ 12 Ω, -0.15 A, LL	
		ISP670P06NMA 67 mΩ, -3.7 A, NL				BSS83P ³⁾ 3 Ω, -0.33 A, LL		
		ISP12DP06NM ^{1) 2)} 125 mΩ, -2.8 A, NL				ISS55EP06LM ^{1) 3)} 7 Ω, -0.18 A, LL		
		ISP13DP06NMS ^{1) 2)} 125 mΩ, -2.8 A, NL				BSS84P ³⁾ 12 Ω, -0.17 A, LL		
		BSP613P ²⁾ 130 mΩ, -2.9 A, NL						
		ISP25DP06NM ^{1) 2)} 250 mΩ, -1.9 A, NL						
		ISP26DP06NMS ^{1) 2)} 260 mΩ, -1.9 A, NL						
		BSP170P ²⁾ 300 mΩ, -1.9 A, NL						
		ISP25DP06LM ^{1) 3)} 310 mΩ, -1.9 A, LL						
		ISP25DP06LMS ^{1) 3)} 310 mΩ, -1.9 A, LL						
		BSP171P ³⁾ 450 mΩ, -1.9 A, LL						
		ISP75DP06LM ^{1) 3)} 1 Ω, -1.1 A, LL						
		BSP315P ³⁾ 1.4 Ω, -1.17 A, LL						
	-40 V		IRF5803 ^{1) 2)} 112 mΩ, -3.4 A, NL					
	-30 V		IRFTS9342 ^{1) 2)} 40 mΩ, -5.8 A, NL			IRLML9301 ^{1) 3)} 103 mΩ, -1.3 A, LL		
			BSL307SP ³⁾ 74 mΩ, -5.5 A, LL			BSS308PE ³⁾ 130 mΩ, -2.1 A, LL, ESD		
			BSL308PE ³⁾ 130 mΩ, -2.1 A, LL, dual, ESD			IRLML5203 ^{1) 3)} 165 mΩ, -3.0 A, LL		
						BSS314PE ³⁾ 230 mΩ, -1.5 A, LL, ESD		
						BSS315P ³⁾ 270 mΩ, -1.5 A, LL		
						IRLML9303 ^{1) 3)} 270 mΩ, -2.3 A, LL		
	-20 V		BSL207SP ⁴⁾ 41 mΩ, -6.0 A, SLL			IRLML2244 ^{1) 4)} 95 mΩ, -4.3 A, SLL	BSS209PW ⁴⁾ 900 mΩ, -0.58 A, SLL	BSV236SP ⁴⁾ 285 mΩ, -1.5 A, SLL
			IRLTS2242 ^{1) 4)} 55 mΩ, -6.9 A, SLL			IRLML6402 ^{1) 4)} 135 mΩ, -3.7 A, SLL	BSS223PW ⁴⁾ 2.1 Ω, -0.39 A, SLL	BSD223P ⁴⁾ 2.1 Ω, -0.39 A, SLL, dual
			IRLMS6802 ^{1) 4)} 100 mΩ, -5.6 A, SLL			IRLML2246 ^{1) 4)} 236 mΩ, -2.6 A, SLL		
			BSL211SP ⁴⁾ 110 mΩ, -4.7 A, SLL			BSS215P ⁴⁾ 280 mΩ, -1.5 A, SLL		
	-12 V					IRLML6401 ^{1) 4)} 125 mΩ, -4.3 A, ULL		

Small signal/small power complementary



Voltage [V]		TSOP-6	SOT-363
Complementary	-20/20	BSL215C ⁴⁾ N: 250 mΩ, 1.5 A, SLL P: 280 mΩ, -1.5 A, SLL	BSD235C ⁴⁾ N: 600 mΩ, 0.95 A, SLL P: 2.1 Ω, -0.53 A, SLL
	-30/30	BSL308C ³⁾ N: 93 mΩ, 2.3 A, LL P: 130 mΩ, -2.0 A, LL	
		BSL316C ³⁾ N: 280 mΩ, 1.4 A, LL P: 270 mΩ, -1.5 A, LL	



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1) not qualified to Automotive AEC-Q101
2) $R_{DS(on)}$ specified at 10 V

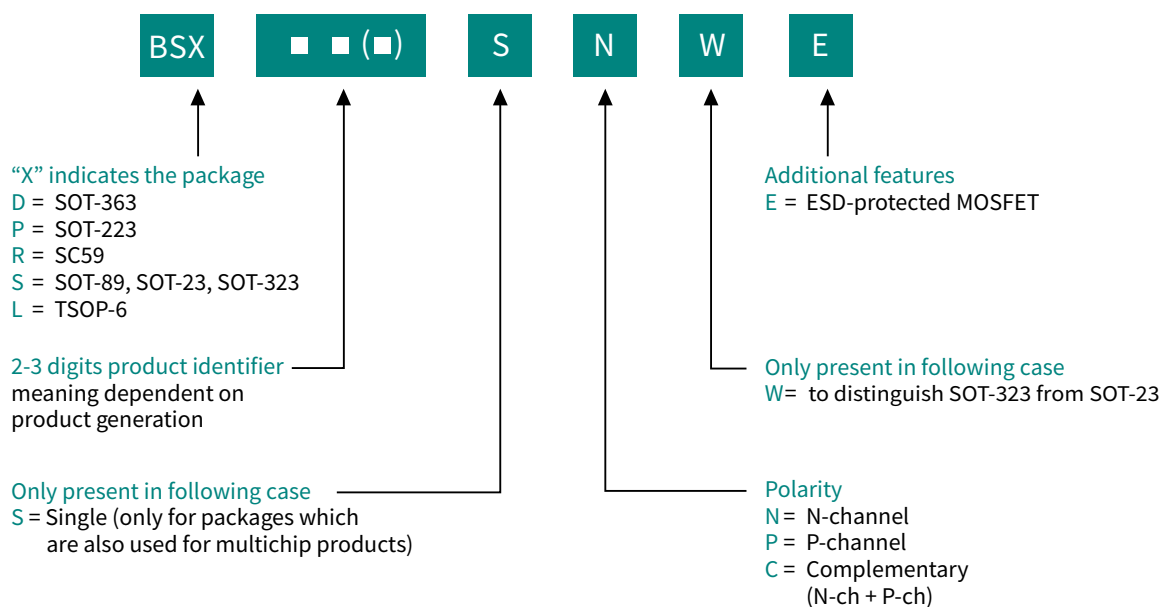
3) $R_{DS(on)}$ specified at 4.5 V
4) $R_{DS(on)}$ specified at 2.5 V

5) $R_{DS(on)}$ specified at 1.8 V
6) $R_{DS(on)}$ specified at 0 V

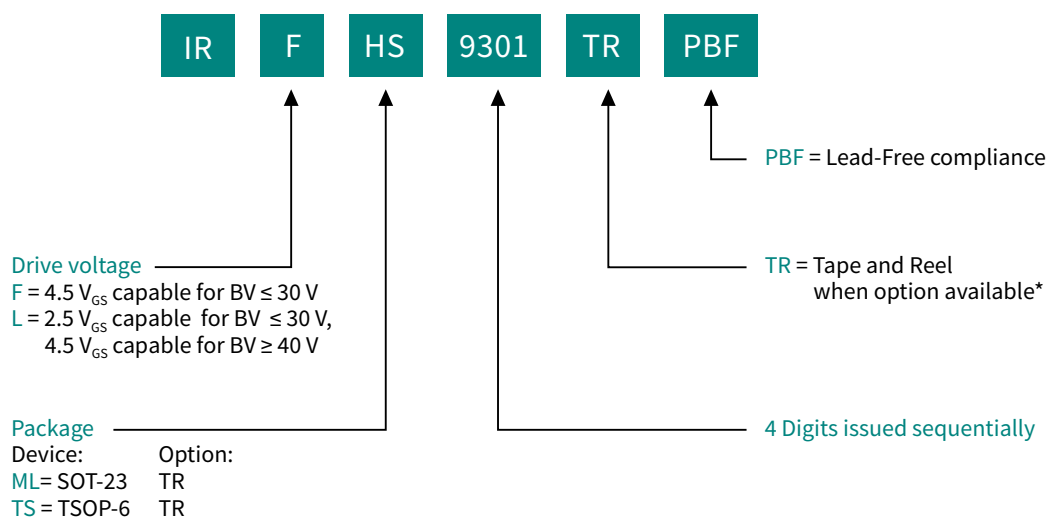
*Coming soon

Nomenclature

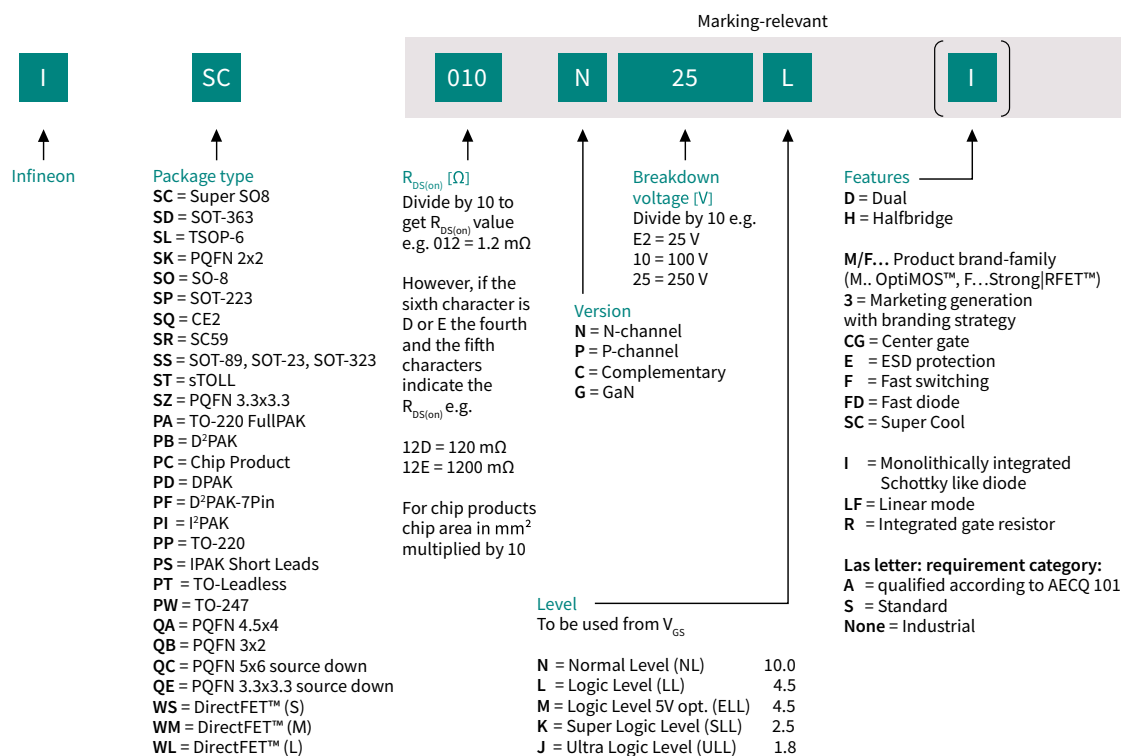
Small signal



Small power



Small signal and small power



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Published by
Infineon Technologies Austria AG
9500 Villach, Austria

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