Small Signal and Small Power MOSFETs

Selection guide 2023

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Small-signal/small-power N-channel

Automotive · Consumer · DC-DC · eMobility · Industrial drives · Motor control · Notebook · Onboard · Telecom

	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, 3.2A, 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		
						BSS159N [6] 8 Ω, 0.13 A, depletion		
	100 V	IRFL4310 200 mΩ, 1.6 A, NL				IRLML0100 235 mΩ, 1.6 A, LL		
		BSP373N [2] 240 mΩ, 1.8 A, NL				BSS119N [3] 10 Ω, 0.19 A, LL		
		BSP372N [3] 270 mΩ, 1.8 A, LL				BSS123I [1] [3] 10 Ω 0.19 A, LL		
		BSP296N [3] 800 mΩ, 1.2 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, LL		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

For more details on the product, click on the part number, visit infineon.com or contact our product support.

Small signal/small power P-channel

Automotive · Consumer · DC-DC · eMobility · Industrial drives · Notebook · Onboard

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	ISP16DP10LM [1] [3] 190 mΩ, -3.9 A, LL			BSR316P [3] 2.2 Ω, -0.36 A, LL			
		BSP322P [3] 1 Ω, -1.0 A, LL						
		ISP98DP10LM [1] [3] 1.05 Ω, -1.55 A, LL						
		ISP20EP10LM [1] [3] 2.2 Ω, -0.99 A, LL						
		BSP322P [3] 1 Ω, -1.0 A, LL						
	-60 V	ISP650P06NM [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	
		ISP12DP06NM [1] [2] 125 mΩ, -2.8 A, NL						
		ISP13DP06NMS [1] [2] 125 mΩ, -2.8 A, NL				BSS83P [3] 3 Ω, -0.33 A, LL		
		BSP613P [2] 130 mΩ, -2.9 A, NL				ISS55EP06LM [1] [3] 7 Ω, -0.18 A, LL		
		ISP25DP06NM [1] [2] 250 mΩ, -1.9 A, NL				BSS84P [3] 12 Ω, -0.17 A, LL		
		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] [4] 270 mΩ, -2.3 A, LL		
						IRLML5103 [1] [3] 1000 mΩ, -0.76A, 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 [4] 125 mΩ, -4.3 A, ULL		

Small signal/small power complementary

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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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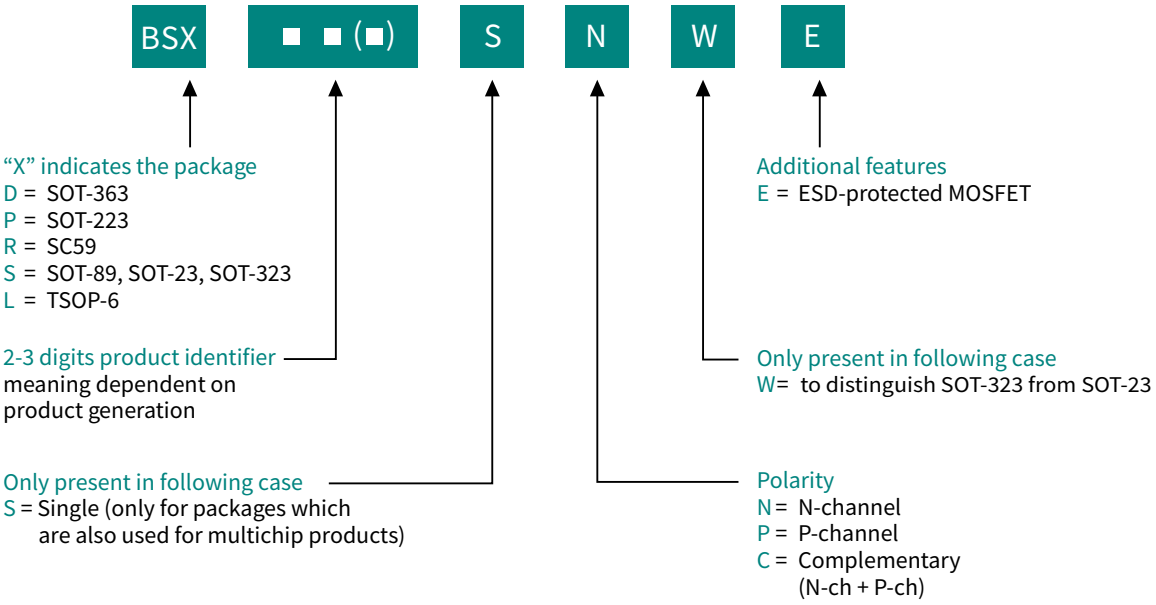
4) $R_{DS(on)}$ specified at 2.5 V
5) $R_{DS(on)}$ specified at 1.8 V
6) $R_{DS(on)}$ specified at 0 V

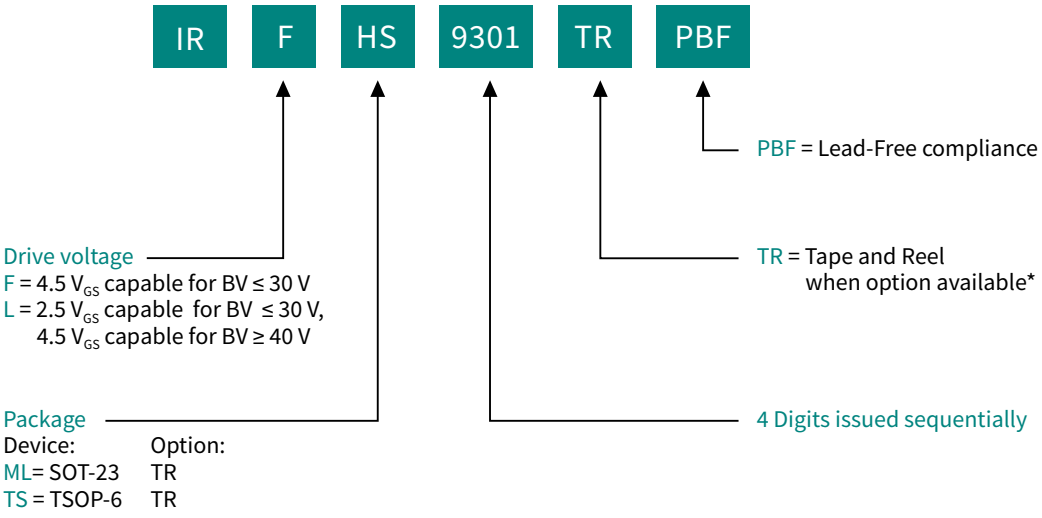
For more details on the product, click on the part number, visit infineon.com or contact our product support.

Nomenclature

Small signal



Small power



Small signal and small power

Marking-relevant

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Package type
SC = Super SO8
SD = SOT-363
SL = TSOP-6
SK = PQFN 2x2
SO = SO-8
SP = SOT-223
SQ = CE2
SR = SC59
SS = SOT-89, SOT-23, SOT-323
ST = sTOLL
SZ = PQFN 3.3x3.3
PA = TO-220 FullPAK
PB = D²PAK
PC = Chip Product
PD = DPAK
PF = D²PAK-7Pin
PI = I²PAK
PP = TO-220
PS = IPAK Short Leads
PT = TO-Leadless
PW = TO-247
QA = PQFN 4.5x4
QB = PQFN 3x2
QC = PQFN 5x6 source down
QE = PQFN 3.3x3.3 source down
WS = DirectFET™ (S)
WM = DirectFET™ (M)
WL = DirectFET™ (L)

$R_{DS(on)}$ [Ω]
Divide by 10 to get $R_{DS(on)}$ value
e.g. 012 = 1.2 mΩ

However, if the sixth character is D or E the fourth and the fifth characters indicate the $R_{DS(on)}$ e.g.

12D = 120 mΩ
12E = 1200 mΩ

For chip products chip area in mm² multiplied by 10

Version
N = N-channel
P = P-channel
C = Complementary
G = GaN

Breakdown voltage [V]
Divide by 10 e.g.
E2 = 25 V
10 = 100 V
25 = 250 V

Level
To be used from V_{GS}

N = Normal Level (NL)	10.0
L = Logic Level (LL)	4.5
M = Logic Level 5V opt. (ELL)	4.5
K = Super Logic Level (SLL)	2.5
J = Ultra Logic Level (ULL)	1.8

Features
D = Dual
H = Halfbridge

M/F… Product brand-family
(M.. OptiMOS™, F…Strong|RFET™)
3 = Marketing generation with branding strategy
CG = Center gate
E = ESD protection
F = Fast switching
FD = Fast diode
SC = Super Cool

I = Monolithically integrated Schottky like diode
LF = Linear mode
R = Integrated gate resistor

Las letter: requirement category:
A = qualified according to AECQ 101
S = Standard
None = Industrial

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