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Packages


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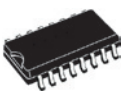
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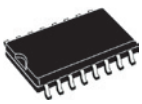
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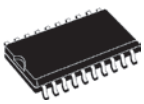
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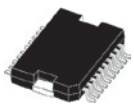
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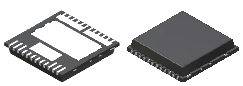
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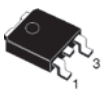
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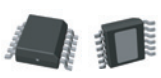
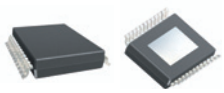
PPAK


PowerSSO-12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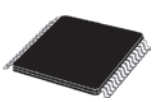
PowerSSO-36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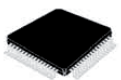
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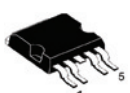
OCTAPAK


P²PAK


HPAK

Note: All packages are Lead Free compliant

Note: M0-7 High side switches and OMNIFET III are to be preferred for new design-in.

HIGH-SIDE SWITCHES – SINGLE CHANNEL

Part number	Package	Technology	Supply voltage (V_{cc})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Digital status	Current sense	Multi-sense
			min (V)	max (V)						
VN7140AJ-E	PowerSSO-16	M0-7	4	28	38	140	12			•
VN7140AS-E	SO-8	M0-7	4	28	38	140	12		•	
VN7050AJ-E	PowerSSO-16	M0-7	4	28	38	50	30			•
VN7050AS-E	SO-8	M0-7	4	28	38	50	30		•	
VN7040AJ-E	PowerSSO-16	M0-7	4	28	38	40	34			•
VN7040AS-E	SO-8	M0-7	4	28	38	40	34		•	
VN7020AJ-E	PowerSSO-16	M0-7	4	28	38	20	63			•
VN7016AJ-E	PowerSSO-16	M0-7	4	28	38	16	77			•
VN7010AJ-E	PowerSSO-16	M0-7	4	28	38	10	91			•
VN7007AH-E (*)	Octapak	M0-7	4	28	38	7	110		•	
VN7004AH-E (*)	Octapak	M0-7	4	28	38	4.9	140		•	
VN5E160MS-E	SO-8	M0-5Enhanced (M vers.)	4.5	28	41	160	10		•	
VN5E050MJ-E	PowerSSO-12	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VN5E025MJ-E	PowerSSO-12	M0-5Enhanced (M vers.)	4.5	28	41	25	60		•	
VN5E016MH-E	HPAK	M0-5Enhanced (M vers.)	4.5	28	41	16	73		•	
VN5E010MH-E	HPAK	M0-5Enhanced (M vers.)	4.5	28	41	10	85		•	
VN5E160AS-E	SO-8	M0-5Enhanced	4.5	28	41	160	10		•	
VN5E160ASO-E	SO-16L	M0-5Enhanced	4.5	28	41	160	10		•	
VN5E160S-E	SO-8	M0-5Enhanced	4.5	28	41	160	10	•		
VN5E050AJ-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	50	27		•	
VN5E050ASO-E	SO-16L	M0-5Enhanced	4.5	28	41	50	27		•	
VN5E050J-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	50	27	•		
VN5E025AJ-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	25	60		•	
VN5E025ASO-E	SO-16L	M0-5Enhanced	4.5	28	41	25	60		•	
VN5E016AH-E	HPAK	M0-5Enhanced	4.5	28	41	16	73		•	
VN5E010AH-E	HPAK	M0-5Enhanced	4.5	28	41	10	85		•	
VN5160S-E	SO-8	M0-5	4.5	36	41	160	5	•		
VN5050AJ-E	PowerSSO-12	M0-5	4.5	36	41	50	18		•	
VN5050J-E	PowerSSO-12	M0-5	4.5	36	41	50	18	•		

HIGH-SIDE SWITCHES – SINGLE CHANNEL

Part number	Package	Technology	Supply voltage (V_{cc})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Digital status	Current sense	Multi-sense
			min (V)	max (V)						
VN5025AJ-E	PowerSSO-12	M0-5	4.5	36	41	25	40		•	
VN5016AJ-E	PowerSSO-12	M0-5	4.5	36	41	16	60		•	
VN5012AK-E	PowerSSO-24	M0-5	4.5	36	41	12	65		•	
VN5010AK-E	PowerSSO-24	M0-5	4.5	36	41	10	65		•	
VN5E006ASP-E	PowerSO-10	M0-5	4.5	28	41	6	100		•	
VN800PS-E	SO-8	M0-3	5.5	36	41	135	1.3	•		
VN800PT-E	PPAK	M0-3	5.5	36	41	135	1.3	•		
VN750B5-E	P²PAK	M0-3	5.5	36	41	60	9	•		
VN750-E	PENTAWATT	M0-3	5.5	36	41	60	9	•		
VN750PS-E	SO-8	M0-3	5.5	36	41	60	9	•		
VN750PT-E	PPAK	M0-3	5.5	36	41	60	9	•		
VN750SMP-E	SO-8	M0-3	5.5	36	41	55	9	•		
VN820B5-E	P²PAK	M0-3	5.5	36	41	40	13	•		
VN820PT-E	PPAK	M0-3	5.5	36	41	40	13	•		
VN820SP-E	PowerSO-10	M0-3	5.5	36	41	40	13	•		
VN920DB5-E	P²PAK	M0-3	5.5	36	41	18	45	•		
VN920B5-E	P²PAK	M0-3	5.5	36	41	16	45		•	
VN920DSP-E	PowerSO-10	M0-3	5.5	36	41	16	45	•		
VN920-E	PENTAWATT	M0-3	5.5	36	41	16	45		•	
VN920PEP-E	PowerSSO-24	M0-3	5.5	36	41	15	45		•	
VN920SP-E	PowerSO-10	M0-3	5.5	36	41	15	45		•	
VN610SP-E	PowerSO-10	M0-3	5.5	36	41	10	75		•	

(*) In development. Available in Q1/2014

HIGH-SIDE SWITCHES – DUAL CHANNEL

Part number	Package	Technology	Supply voltage (V_{cc})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Digital status	Current sense	Multi-sense
			min (V)	max (V)						
VND7140AJ-E	PowerSSO-16	M0-7	4	28	38	140	12			•
VND7050AJ-E	PowerSSO-16	M0-7	4	28	38	50	30			•
VND7040AJ-E	PowerSSO-16	M0-7	4	28	38	40	34			•
VND7030AJ-E	PowerSSO-16	M0-7	4	28	38	30	56			•
VND7020AJ-E	PowerSSO-16	M0-7	4	28	38	20	63			•
VND7012AY-E (*)	PowerSSO-36	M0-7	4	28	38	12	75			•
VND7004AY-E (**)	PowerSSO-36	M0-7	4	28	38	4	100			•
VND5E160MJ-E	PowerSSO-12	M0-5Enhanced (M vers.)	4.5	28	41	160	10		•	
VND5E050MCJ-E	PowerSSO-12	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VND5E050MCK-E	PowerSSO-24	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VND5E050MJ-E	PowerSSO-12	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VND5E050MK-E	PowerSSO-24	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VND5E025MK-E	PowerSSO-24	M0-5Enhanced (M vers.)	4.5	28	41	25	60		•	
VND5E012MY-E	PowerSSO-36	M0-5Enhanced (M vers.)	4.5	28	41	12	74		•	
VND5E008MY-E	PowerSSO-36	M0-5Enhanced (M vers.)	4.5	28	41	8	85		•	
VND5E160AJ-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	160	10		•	
VND5E160ASO-E	SO-16L	M0-5Enhanced	4.5	28	41	160	10		•	
VND5E160J-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	160	10	•		
VND5E050ACJ-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	50	27		•	
VND5E050ACK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	50	27		•	
VND5E050AJ-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	50	27		•	
VND5E050AK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	50	27		•	
VND5E050ASO-E	SO-16L	M0-5Enhanced	4.5	28	41	50	27		•	
VND5E050J-E	PowerSSO-12	M0-5Enhanced	4.5	28	41	50	27	•		
VND5E050K-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	50	27	•		
VND5E025AK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	25	60		•	
VND5E025AY-E	PowerSSO-36	M0-5Enhanced	4.5	28	41	25	47		•	
VND5E025AS-E	SO-16L	M0-5Enhanced	4.5	28	41	25	60		•	
VND5E025BK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	25	60		•	
VND5E025LK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	25	40		•	
VND5E025NAY-E	PowerSSO-36	M0-5Enhanced	4.5	28	41	25	60		•	

HIGH-SIDE SWITCHES – DUAL CHANNEL

Part number	Package	Technology	Supply voltage (V_{cc})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Digital status	Current sense	Multi-sense
			min (V)	max (V)						
VND5E012AY-E	PowerSSO-36	M0-5Enhanced	4.5	28	41	12	74		•	
VND5E008ASP-E	PowerSO-16	M0-5Enhanced	4.5	28	41	8	85		•	
VND5E008AY-E	PowerSSO-36	M0-5Enhanced	4.5	28	41	8	85		•	
VND5E006ASP-E	PowerSO-16	M0-5Enhanced	4.5	28	41	6	100		•	
VND5E004A-E	PQFN	M0-5Enhanced	4.5	28	41	4	100		•	
VND5E004A30-E	MultiPowerSO-30	M0-5Enhanced	4.5	28	41	4	100		•	
VND5160AJ-E	PowerSSO-12	M0-5	4.5	36	41	160	5		•	
VND5160J-E	PowerSSO-12	M0-5	4.5	36	41	160	5	•		
VND5050AJ-E	PowerSSO-12	M0-5	4.5	36	41	50	18		•	
VND5050AK-E	PowerSSO-24	M0-5	4.5	36	41	50	18		•	
VND5050J-E	PowerSSO-12	M0-5	4.5	36	41	50	18	•		
VND5050K-E	PowerSSO-24	M0-5	4.5	36	41	50	18	•		
VND5025AK-E	PowerSSO-24	M0-5	4.5	36	41	25	40		•	
VND5012AK-E	PowerSSO-24	M0-5	4.5	36	41	12	60		•	
VND810P-E	SO-16	M0-3	5.5	36	41	160	5	•		
VND810PEP-E	PowerSSO-12	M0-3	5.5	36	41	160	5	•		
VND810SP-E	PowerSO-10	M0-3	5.5	36	41	160	5	•		
VND810MSP-E	PowerSO-10	M0-3	5.5	36	41	150	0.9	•		
VND830AEP-E	PowerSSO-24	M0-3	5.5	36	41	60	10		•	
VND830ASP-E	PowerSO-10	M0-3	5.5	36	41	60	9		•	
VND830LSP-E	PowerSO-10	M0-3	5.5	36	41	60	23	•		
VND830P-E	SO-16L	M0-3	5.5	36	41	60	9	•		
VND830MSP-E	PowerSO-10	M0-3	5.5	36	41	60	9	•		
VND830PEP-E	PowerSSO-24	M0-3	5.5	36	41	60	9	•		
VND830SP-E	PowerSO-10	M0-3	5.5	36	41	60	9	•		
VND600P-E	SO-16L	M0-3	5.5	36	41	35	40		•	
VND600PEP-E	PowerSSO-24	M0-3	5.5	36	41	30	40		•	
VND600SP-E	PowerSO-10	M0-3	5.5	36	41	30	40		•	
VND920P-E	SO-28	M0-3	5.5	36	41	16	45		•	

(*) In development. Available in Q1/2014
(**) In development. Available in Q4/2014

HIGH-SIDE SWITCHES – QUAD CHANNEL

Part number	Package	Technology	Supply voltage (V_{cc})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Digital status	Current sense	Multi-sense
			min (V)	max (V)						
VNQ7140AJ-E	PowerSSO-16	M0-7	4	28	38	140	12			•
VNQ7050AJ-E (**)	PowerSSO-16	M0-7	4	28	38	50	27		•	
VNQ7040AY-E (*)	PowerSSO-36	M0-7	4	28	38	40	34			•
VNQ5E160MK-E	PowerSSO-24	M0-5Enhanced (M vers.)	4.5	28	41	160	10		•	
VNQ5E050MK-E	PowerSSO-24	M0-5Enhanced (M vers.)	4.5	28	41	50	27		•	
VNQ5E250AJ-E	PowerSSO 16	M0-5Enhanced	4.5	28	41	250	5		•	
VNQ5E160AK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	160	10		•	
VNQ5E160K-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	160	10	•		
VNQ5E050AK-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	50	27		•	
VNQ5E050K-E	PowerSSO-24	M0-5Enhanced	4.5	28	41	50	27	•		
VNQ5160K-E	PowerSSO-24	M0-5	4.5	36	41	160	5	•		
VNQ5050AK-E	PowerSSO-24	M0-5	4.5	36	41	50	18		•	
VNQ5050K-E	PowerSSO-24	M0-5	4.5	36	41	50	18	•		
VNQ5027AK-E	PowerSSO-24	M0-5	4.5	36	41	27	40		•	
VNQ500PEP-E	PowerSSO-12	M0-3	5.5	36	41	500	0.6	•		
VNQ810P-E	SO-28	M0-3	5.5	36	41	160	5	•		
VNQ810PEP-E	PowerSSO-24	M0-3	5.5	36	41	160	7.5	•		
VNQ05XSP16-E	PowerSO-16	M0-3	5.5	36	41	110	7.5		•	
VNQ690SP-E	PowerSO-10	M0-3	6	36	41	90	14	•		
VNQ830P-E	SO-28	M0-3	5.5	36	41	65	9	•		
VNQ830PEP-E	PowerSSO-24	M0-3	5.5	36	41	60	18	•		
VNQ660SP	PowerSO-10	M0-3	6	36	41	50	10	•		
VNQ600AP-E	SO-28	M0-3	5.5	36	41	35	40		•	
VNQ600P-E	SO-28	M0-3	5.5	36	41	35	40		•	

(*) In development. Available in Q1/2014
(**) In development. Available in Q4/2014

HIGH-SIDE SWITCHES WITH SPI AND ASYMMETRICAL OUTPUT

Part number	Package	Technology	Supply voltage (V_{CC})		Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Current sense	SPI	Description
			min (V)	max (V)						
VNQ6040S-E	PowerSSO-36	M0-6	4.5	28	40	4x40	25	•	•	Rear corner lights
VNQ6004SA-E	PowerSSO-36	M0-6	4.5	28	40	2x10	50	•	•	Front corner lights
						2x30	25			

HIGH-SIDE SWITCHES FOR 24 V APPLICATIONS – TRUCK DEVICES

Part number	Package	Technology	Supply voltage (V_{CC}) min (V)	Supply voltage (V_{DD}) max (V)	Absolute max supply voltage (V)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Drain current limit (I_{lim}) typ (A)	Current sense
VND5T100A-E (*)	SO-16N	M0-5T	8	36	58	100	22	•
VND5T100AJ-E	PowerSSO-12	M0-5T	8	36	58	100	22	•
VND5T100LAJ-E	PowerSSO-12	M0-5T	8	36	58	100	22	Optimized for LED applications
VND5T050AK-E	PowerSSO-24	M0-5T	8	36	58	50	34	•
VND5T035AK-E	PowerSSO-24	M0-5T	8	36	58	35	42	•
VND5T035LAK-E	PowerSSO-24	M0-5T	8	36	58	35	42	Optimized for LED applications
VN5T016AH-E	HPAK	M0-5T	8	36	58	16	67	•
VND5T016ASP-E	PowerSO-16	M0-5T	8	36	58	16	60	•
VN5T006ASP-E	PowerSO-10	M0-5T	8	36	58	6	84	•

(*) In development. Available in Q4/2013

SMART POWER LOW-SIDE SWITCHES

Part number	Package	Technology	Number of Channels	Clamp Voltage typ (V)	Drain Current limit (I_{lim}) typ [A]	Max on-state resistance $R_{DS(on)}$ (max) [mΩ]
VND1NV04-E	DPAK	M0-3	1	45	2.6	250
VND1NV04-1-E	IPAK	M0-3	1	45	2.6	250
VNN1NV04P-E	SOT-223	M0-3	1	45	2.6	250
VNS1NV04P-E	SO-8	M0-3	1	45	2.6	250
VND3NV04-E	DPAK	M0-3	1	45	5	120
VNN3NV04P-E	SO-8; SOT-223	M0-3	1	45	5	120
VNS3NV04P-E	SO-8	M0-3	1	45	5	120
VNN7NV04P-E	SOT-223	M0-3	1	45	9	65
VNS7NV04P-E	SO-8	M0-3	1	45	9	65
VND7NV04-E	DPAK	M0-3	1	45	9	60
VNB14NV04-E	D2PAK	M0-3	1	45	18	35
VND14NV04-E	DPAK	M0-3	1	45	18	35
VND14NV04-1-E	IPAK	M0-3	1	45	18	35
VNS14NV04P-E	SO-8	M0-3	1	45	18	35
VNB35NV04-E	D2PAK	M0-3	1	45	45	10
VNV35NV04-E	PowerSO-10	M0-3	1	45	45	10
VNS1NV04DP-E	SO-8	M0-3	2	45	2.6	250
VNS3NV04DP-E	SO-8	M0-3	2	45	5	120

SMART POWER LOW-SIDE SWITCHES

Part number	Package	Number of channels	Technology	Clamp voltage typ (V)	Drain current limit (I_{lim}) typ (A)	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Digital status
VNL5300S5-E	SO-8	1	M0-5	46	2	300	•
VNL5160N3-E	SOT-223	1	M0-5	46	5	160	
VNL5160S5-E	SO-8	1	M0-5	46	5	160	•
VNL5090N3-E	SOT-223	1	M0-5	46	18	90	
VNL5090S5-E	SO-8	1	M0-5	46	18	90	•
VNL5090S5-E	SO-8	1	M0-5	46	18	90	•
VNL5050N3-E	SOT-223	1	M0-5	46	27	50	
VNL5050S5-E	SO-8	1	M0-5	46	27	50	•
VNL5030J-E	PowerSSO-12	1	M0-5	46	35	30	•
VNL5030S5-E	SO-8	1	M0-5	46	35	30	•
VNLD5300-E	SO-8	2	M0-5	46	2	300	•
VNLD5160-E	SO-8	2	M0-5	46	5	160	•
VNLD5090-E	SO-8	2	M0-5	46	18	90	•

Voltage regulators

Part number	Package	Number of outputs	Regulated output voltage (V)	Output current (I_{OUT}) (mA)	Output tolerance (%)	Dropout voltage (V_{DP})		Reset output	Enable pin	Early warning	Watchdog timer	Watchdog enable	Supply current (standby) typ (µA)	Quiescent current at low load typ (µA)
						typ (mV)	max (mV)							
L4925PD	PowerSO-20	1	5	500	±2	300		•						190
L4938ED-E	SO-20	2	5 Adj	100	±2	300		•	•	•				210
L4938EPD	PowerSO-20	2	5 Adj	400	±2	300		•	•	•				210
L4949ED-E	SO-8	1	5	100	±1	300		•		•				200
L4949EP-E	SO-20	1	5	100	±1	300		•		•				200
L4979D-E	SO-8	1	5	150	±2	200		•	•		•		6	200
L4979MD	SO-20	1	5	150	±2	200		•	•		•		6	100
L4988D	SO-8	1	5	200	±2	270		•			•	•		130
L4988MD	SO-20	1	5	200	±2	270		•			•	•		130
L4989D	SO-8	1	5	150	±3	180		•			•	•		110
L4989MD	SO-20	1	5	150	±3	180		•			•	•		110
L4993D	SO-8	1	5	150	±2	200		•			•	•		100
L4993MD	SO-20	1	5	150	±2	200		•			•	•		100
L4995RJ	PowerSSO-12	1	5	500	±2	270		•						90
L4995RK	PowerSSO-24	1	5	500	±2	270		•						90
L4995AJ	PowerSSO-12	1	5	500	±2	270		•	•				3	90
L4995AK	PowerSSO-24	1	5	500	±2	270		•	•				3	90
L4995J	PowerSSO-12	1	5	500	±2	270		•	•		•		3	90
L4995K	PowerSSO-24	1	5	500	±2	270		•	•		•		3	90
L5150BNTR	SOT-223	1	5	150	±2									38
L5150CJ	PowerSSO-12	1	5	150	±2		500	• (1)		•				55
L5150CS	SO-8	1	5	150	±2		500	• (1)		•				55
L5150GJ	PowerSSO-12	1	5	150	±2		500	• (1)	•	•			5	55
L5300AH7	HPAK	1	5	300	±2		500	•	•				5	55
L5300GJ	PowerSSO-12	1	5	300	±2		500	•	•	•			5	55
L5300EPT	PPAK	1	5	300	±2		500		•				5	55
L5300RPT	PPAK	1	5	300	±2		500	•					5	55

(1) Adjustable threshold

Door modules

Part number	Package	Driver stages	Max on-state resistance $R_{DS(on)}$ (mΩ)	Current limitation I_{lim} (A)	Operating range Vs (V)	PWM control	Short-circuit protection	Current sense	Thermal shutdown	Reverse battery protection	Diagnostics and programming	EC control	LED mode	H-bridge control	Description
L9949	PowerSO-20	1 full bridge	150	6	7 to 28		•	•	•		SPI	-			Mid-end front-door module
		3 half bridges	800	1.6											
		1 high-side switch	100	6											
L9950 **L9950XP**	PowerSO-36 PowerSSO-36	2 half bridges	300	3	7 to 28	•	•	•	•	•	SPI	-			High-end front-door module
		2 half bridges	800	1.5											
		1 full bridge	150	6											
		4 high-side switches	800	1.5											
		1 high-side switch	100	6											
L9951 **L9951XP**	PowerSO-36 PowerSSO-36	1 half bridge	150	7.4	7 to 28	•	•	•	•	•	SPI	-			Rear-door module
		2 half bridges	200	5											
		2 high-side switches	800	1.25											
L9953 **L9953XP**	PowerSO-36 PowerSSO-36	3 half bridges	800	1.5	7 to 28	•	•	•	•	•	SPI	-			Mid-end front-door module
		1 full bridge	150	6											
		2 high-side switches	500	1.5											
		1 high-side switch	100	6											
L9953LXP	PowerSSO-36	3 half bridges	800	1.5	7 to 28	•	•	•	•	•	SPI	-	2x		Mid-end front-door module compatible with bulbs/LEDs
		1 full bridge	150	6											
		2 high-side switches	500/1800	1.5/0.35											
		1 high-side switch	100	6											
L9954 **L9954XP**	PowerSO-36 PowerSSO-36	3 half bridges	800	1.5	7 to 28	•	•	•	•	•	SPI	-			Mid-end front-door module without door lock
		2 high-side switches	500	1.5											
		1 high-side switch	100	6											
L9954LXP	PowerSSO-36	3 half bridges	800	1.5	7 to 28	•	•	•	•	•	SPI	-	2x		Mid-end front-door module without door lock compatible with bulbs/LEDs
		2 high-side switches	500/1800	1.5/0.35											
		1 high-side switch	100	6											

Part number	Package	Driver stages	Max on-state resistance $R_{DS(on)}$ (mΩ)	Current limitation I_{lim} (A)	Operating range Vs (V)	PWM control	Short-circuit protection	Current sense	Thermal shutdown	Reverse battery protection	Diagnostics and programming	EC control	LED mode	H-bridge control	Description
L99DZ70XP	PowerSSO-36	1 full bridge	150	6	7 to 28	•	•	•	•	•	SPI	6-bit resolution 1.2 V/1.5 V	4x		High-end front-door module compatible with bulbs/LEDs. Control circuitry for electrochromic mirror glass.
		2 half bridges	300	3											
		2 half bridges	1600	0.75											
		1 high-side switch	90	6											
		2 configurable high-side switches	500/1800	1.5/0.4											
		2 high-side switches	1600	0.5											
L99DZ80EP	TQFP64	1 full bridge	150	6	7 to 28	•	•	•	•	•	SPI	6-bit resolution 1.2V/1.5V Negative Discharge	4x	•	High-end front door module compatible with bulbs/LEDs. Control circuitry for electrochromic mirror glass with possibility to negative discharge. H-Bridge control, for external MOSFETs, with adjustable slew-rate
		2 half bridges	300	3											
		2 half bridges	1600	0.5											
		1 high-side switch	100	5											
		1 configurable high-side switch	500/1600	1.5/0.35											
		1 configurable high-side switch	800/1600	0.7/0.35											
		2 high-side switches	1600	0.5											
L99DZ81EP	TQFP64	1 full bridge	150	6	7 to 28	•	•	•	•	•	SPI	-	4x	•	High-end front door module compatible with bulbs/LEDs. H-Bridge control, for external MOSFETs, with adjustable slew-rate
		1 half bridge	300	3											
		1 configurable high-side switch	500/1600	1.5/0.35											
		1 configurable high-side switch	800/1600	0.7/0.35											
		2 high-side switches	1600	0.5											

Power management for automotive systems

Part number	Package	Transceiver		Voltage regulators					Driver stages		On-board features	Description
		Transmission rate	Transceiver description	Outputs	Accuracy	Drop voltage V_{DP} (typ) (mV)	Reset	Watchdog	Outputs	Driver description		
L4969URD-E	SO-20	125 kbaud	Fault tolerant low-speed CAN transceiver	5 V @ 200 mA	± 2 %	250 @ I_{LOAD} = 100 mA	•	•				Basic system chip
L4969UR-E	PowerSO-20	125 kbaud	Fault tolerant low-speed CAN transceiver	5 V @ 200 mA	± 2 %	400 @ I_{LOAD} = 150 mA	•	•				Basic system chip
L9952GXP	PowerSSO-36	20 kbaud	LIN transceiver	5 V @ 250 mA	± 2 %	300 @ I_{LOAD} = 100 mA	•	•	4	HSD 1Ω @ 120 mA	• 4 wake-up inputs for contact monitoring • Fail-safe output • Two op-amps for current sense interfacing • Inhibit input for wake-up from external CAN	Power management IC with LIN
				5 V @ 100 mA	± 4%	400 @ I_{LOAD} = 50 mA			1	HSD 1Ω @ 400 mA		
									2	Relay drivers (2 Ω)		
L99PM62GXP	PowerSSO-36	20 kbaud	LIN and HS CAN transceivers	5 V @ 250 mA	± 2%	300 @ I_{LOAD} = 100 mA	•	•	4	HSD 1 Ω @ 120 mA	• Complete 3-channel contact monitoring interface with programmable cyclic sense functionality • 4 internal PWM timers • Two op-amps with rail-to-rail outputs (VS) and low-voltage inputs • Programmable periodic system wake-up feature	Power management IC with LIN and high-speed CAN
									1	HSD 1 Ω @ 400 mA		
				5 V @ 100 mA	±4 % (3% @ 50 mA)	400 @ I_{LOAD} = 50 mA			2	Relay drivers (2 Ω)		
L99PM60J	PowerSSO-16	20 kbaud	LIN transceiver	5 V @ 100 mA	± 2 %	300 @ I_{LOAD} = 100 mA	•	•	2	HSD 7Ω @ 60 mA	• Configurable fail-safe output • ST SPI interface for mode control and diagnostics • Direct drive feature for HSD	Power management IC with LIN
									2	Relay drivers (2 Ω)		

Part number	Package	Transceiver		Voltage regulators					Driver stages		On-board features	Description
		Transmission rate	Transceiver description	Outputs	Accuracy	Drop voltage V_{DP} (typ) (mV)	Reset	Watchdog	Outputs	Driver description		
L99PM72PXP	PowerSSO-36	20 kbaud	LIN and HS CAN transceivers	5 V @ 250 mA	± 2%	300 @ I_{LOAD} = 100 mA	•	•	4	HSD 1 Ω@ 120 mA	• Complete 3-channel contact monitoring interface with programmable cyclic sense functionality • 4 internal PWM timers Two operational amps with rail-to-rail outputs (VS) and low-voltage inputs • Programmable periodic system wake-up feature	Power management IC with LIN and high-speed CAN supporting selective wake-up functionality according to ISO 11898-6
									1	HSD 1 Ω@ 400 mA		
				5 V @ 100 mA	±4 % (3% @ 50 mA)	400 @ I_{LOAD} = 50 mA			2	Relay drivers (2 Ω)		
L99PM80EP(*)	TQFP 48	20 kbaud	LIN and HS CAN Transceivers	5 or 3.3 V @ 400 mA	±2%	300 @ I_{LOAD}= 200 mA	•	•	1	HSD 7Ω @ 60 mA	• Integrated Boost controller for sustaining low-power conditions • Integrated Buck converter for preregulated supply of low drop voltage regulators • Programmable periodic system wake-up feature • Direct drive feature for HSD	Power management IC with 4 LIN and high-speed CAN according to ISO 11898-5
				5 V @ 50 mA	±2%	300 @ I_{LOAD}= 25 mA			3	Fail safe outputs (7Ω, low side)		
				5 V @ 80 mA	±2%	300 @ I_{LOAD}= 40 mA						

(*) In development. Available in Q2/2014

Motor drivers

Part number	Package	Technology	Output mode	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Current limitation (I_{lim}) typ (A)	Supply voltage (V_{CC})		Absolute max supply voltage (V)	Highlights
						min (V)	max (V)		
L9997ND	SO-20	BCD	2 half bridge	700	1.6	7	16.5	26	• Short-circuit and over-temperature protected
L99ASC03	TQFP-48 ExPad	BCD6	3x half-bridges driver	-	-	6	28	40	• 3 half-bridges driver to control external MOSFET • 5 V voltage regulator (200 mA continuous) • Watchdog and fail-safe functionality • PWM up to 80 kHz • Configurable current sense amplifier • Advanced BEMF detection IP • Programmable overcurrent protection • Drain-source monitoring and openload detection
L99H01XP	PowerSSO-36	BCD5	H-bridge	280	-	6	28	35	• Programmable free wheeling • Current-sense amplifier/free configuration • Sensing circuitry of external MOSFET with embedded thermal sensor
L99H01QF	LQFP-32	BCD5	H-bridge	280	-	6	28	35	• Programmable free wheeling • Current-sense amplifier/free configuration • Sensing circuitry of external MOSFET with embedded thermal sensor
L99MD01XP	PowerSSO-36	BCD5	Half bridge	1600	1.1	6	28	40	• Optimized for H-VAC flaps • DC-stepper motor driver • 8 H-bridge driver • Intrinsic DC-DC step-up converter • 2 current monitor outputs • All outputs short-circuit protected
L99MD02XP	PowerSSO-36	BCD5	Half bridge	1600	1.1	6	28	40	• Optimized for H-VAC flaps • DC-motor driver • 6 H-bridge driver • 2 current monitor outputs • All outputs short-circuit protected
VN5770AKP-E	SO-28	M0-5, M0-3	2 HSD and 2 LSD	280	8.5	4.5	36	41	• Active power limitation (patent IP) on high side • Thermal shutdown
VN5772AK-E	SO-28	M0-5	2 HSD and 2 LSD	100	18	4.5	36	41	• Active power limitation (patent IP) on both high and low side • Thermal shutdown
VN770KP-E	SO-28	M0-3	2 HSD and 2 LSD	225	9	5.5	36	41	• Short-circuit and over-temperature protected

Part number	Package	Technology	Output mode	Max on-state resistance $R_{DS(on)}$ max (mΩ)	Current limitation (I_{lim}) typ (A)	Supply voltage (V_{CC})		Absolute max supply voltage (V)	Highlights
						min (V)	max (V)		
VN771KP-E	SO-28	M0-3	2 HSD and 2 LSD	95	9	5.5	36	41	• Short-circuit and over-temperature protected
VN772KP-E	SO-28	M0-3	2 HSD and 2 LSD	125	9	5.5	36	41	• Short-circuit and over-temperature protected
VNH2SP30-E	MultiPowerSO-30	M0-4	Full bridge	19	50	5.5	16	41	• Cross-conduction protection • PWM operations up to 20 kHz • Current sense
VNH3ASP30-E	MultiPowerSO-30	M0-4	Full bridge	42	50	5.5	16	41	• Cross-conduction protection • PWM operations up to 20 kHz • Current sense
VNH3SP30-E	MultiPowerSO-30	M0-3	Full bridge	45	50	5.5	36	40	• Cross-conduction protection • PWM operations up to 10 kHz • Current sense
VNH5019A-E	MultiPowerSO-30	M0-5	Full bridge	18	50	5.5	24	41	• Cross-conduction protection • PWM operations up to 20 kHz • Current sense • Charge pump output for reverse-polarity protection
VNH5050A-E	PowerSSO-36	M0-5	Full bridge	50	42	5.5	18	41	• Cross-conduction protection • PWM operations up to 20 kHz • Current sense • Output protected against short-to-ground and short-to-V_{CC}
VNH5180A-E	PowerSSO-36	M0-5	Full bridge	180	12	5.5	18	41	• Cross-conduction protection • PWM operations up to 20 kHz • Current sense • Output protected against short-to-ground and short-to-V_{CC}
VNH5200AS-E (*)	SO-16	M0-5	Full bridge	200	12	5.5	18	41	• Cross-conduction protection • Current sense • Output protected against short-to-ground and short-to-V_{CC}

(*) In development. Available in Q1/2014

Special devices

Part number	Package	Driver stages	Operating range V_{CC} (V)	Max supply voltage V_{CC} (V)	Accuracy		Highlights	Description
					Oscillating frequency	Low load detection		
L99LD01	LQFP-32	High efficiency constant current LED driver	5.6 to 24	40			• SPI interface • Programmable LED current • Dithering	LED driver
L99CL01XP	PowerSSO-36	8 Channels high-side LED driver	6 to 24	40			• Programmable over-current • SPI interface • Configurable $R_{DS(on)}$	LED driver
L99MC6	PowerSSO-16	3 configurable HSD/LSD 3 low-side switches	6 to 28	40			• $R_{DS(on)}$ = 0.7 Ω at Tj = 25 °C	Various loads driver H-bridge configuration
VN1160-E	DPAK	Power switch for motorbike direction indicator	9 to 16	40			• Lamp-failure detection • Indicator reverse-battery protected	Motorbike indicator driver
VN1160-1-E	IPAK	Power switch for motorbike direction indicator	9 to 16	40			• Lamp-failure detection • Indicator reverse-battery protected	Motorbike indicator driver
VN1160C-E	DPAK	Power switch for motorbike direction indicator	9 to 16	40			• Lamp-failure detection • Indicator reverse-battery protected	Motorbike indicator driver
VN1160C-1-E	IPAK	Power switch for motorbike direction indicator	9 to 16	40			• Lamp-failure detection Indicator reverse-battery protected	Motorbike indicator driver
VN5MB02-E (*)	SO-16	Smart power driver for motorbike direction indicator	9 to 16	40	+/- 5%	+/- 8%	• High accuracy in setting operating frequency and low-load detection • Maximum current detection with latch • Cycle by cycle thermal limitation	Motorbike indicator driver

(*) In development. Available in Q1/2014

SPECIAL DEVICES – REVERSE BATTERY

Part number	Package	Operating range V_{CC} (V)	Max supply voltage V_{CC} (V)	Max on-state resistance $R_{DS(on)}$ (max) (mΩ)	Description
VN5R003H-E	HPAK	4.5 to 28	41	3	Reverse-battery protection for an electronic control unit

SPECIAL DEVICES – INTEGRATED SOLENOID DRIVER - INJECTION GAS SYSTEM

Part number	Package	Operating range V_{CC} (V)	Max supply voltage V_{CC} (V)	Max on-state resistance $R_{DS(on)}$ (mΩ)		Ipeak (A)	Clamp voltage (min) (V)	Description
				Excitation path	Recirculation path			
L99SD01-E	PowerSSO-36	6 to 28	40	60	60	14	44	Current-sense amplifier with internal sense resistor

Ignition drivers

Part number	Package	Technology	High voltage clamp (V_{CL}) typ (V)	Current limitation (I_{lim}) max (A)	Power stage saturation voltage ($V_{CE\ SAT}$)		Supply voltage (V_{CC}) min (V)	Supply voltage (V_{CC}) max (V)	Supply current on state (I_{CC}) max (mA)	Description
					(@ 6 A) max (V)	(@ 15 A) max (V)				
VB525SP-E	PowerSO-10	M1	380	11	2		4.5	5.5	40	Quasi proportional current driving Current flag
VB526SP-E	PowerSO-10	M1	360	11	2		4.5	5.5	40	Quasi proportional current driving Current flag
VBG08H-E	OCTAPAK	BCD5S + IGBT	360	10.5	1.8 @ 6.5 A		6	28	-	Slow turn-on Soft shutdown Coil current limiter Current flag

Part numbering scheme

GET THE RIGHT PRODUCT FOR YOUR NEEDS

M0-5 standard version

M0-5 standard series is a complete product portfolio intended for typical loads in automotive applications, such as a high beam, low beam, turn indicator, interior lighting. For each $R_{DS(on)}$ rating, single-, dual- and quad-channel options are available. Moreover, the devices are equipped with digital diagnostics or with analog current sense.

M0-5Enhanced version

In addition to the standard protection and diagnostic features, M0-5Enhanced products offer:

- Extended load compatibility due to higher current limitation
- Immediate diagnosis reaction over short-to-ground or overload (power limitation detection)
- Open-load/short-to-V_{CC} detection in off-state for the analog current sense option as well

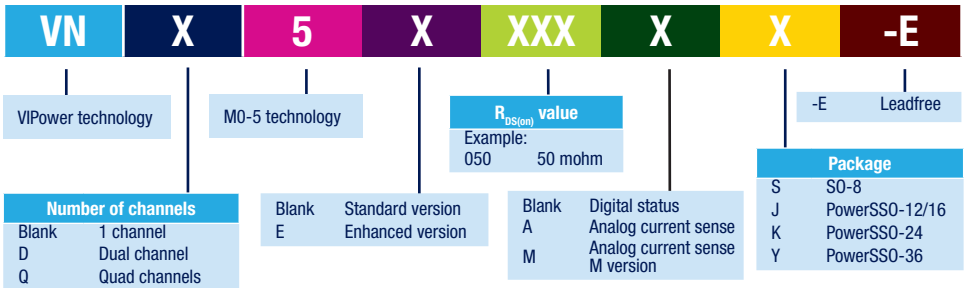
M0-5Enhanced M version

The M versions complete the product portfolio with devices having the same specification as M0-5Enhanced except for the open-load detection in off-state.

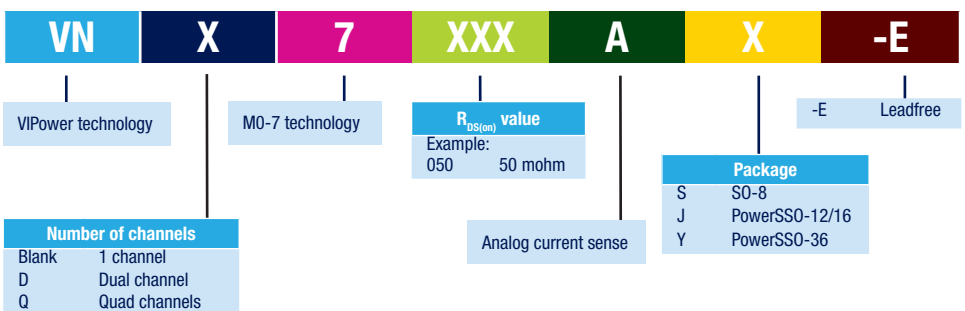
M0-7 version

The brand new M0-7 Product Family further extends the wide range of $R_{DS(on)}$ for optimal device-load pairing in smaller packages and with full pin-to-pin compatibility.

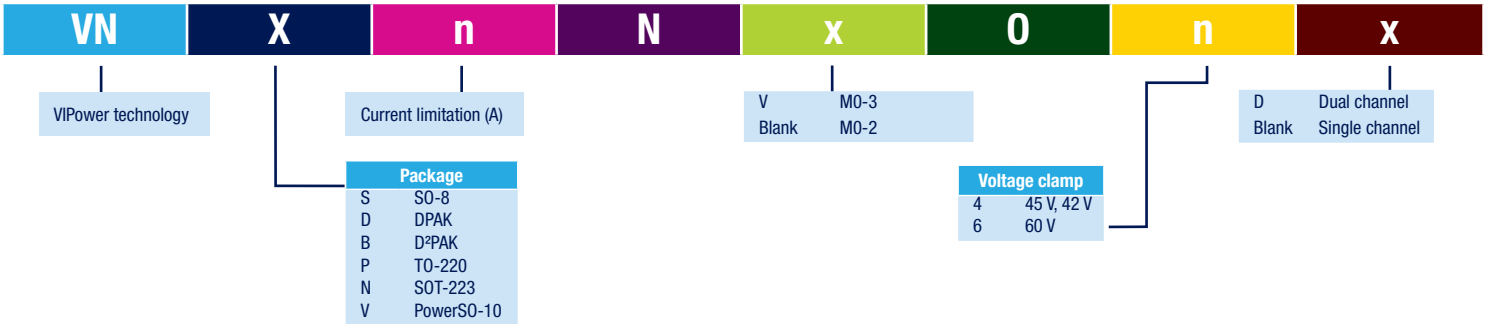
M0-5/M0-5ENHANCED/M VERSION PART NUMBERING SCHEME



M0-7 PART NUMBERING SCHEME



OMNIFET PART NUMBERING SCHEME



OMNIFET III PART NUMBERING SCHEME