Power MOSFETs for Industrial and Consumer

P-channel Power MOSFETs -12V to -100V

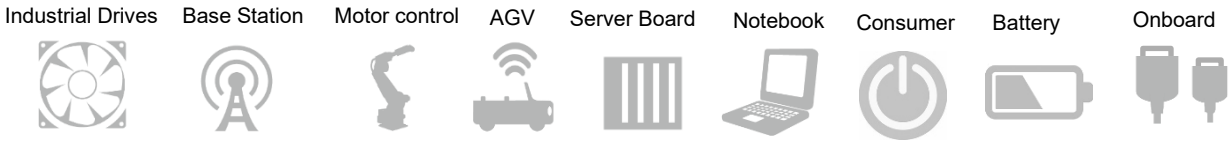
Selection guide 2025

Contents

The main advantage of a P-channel device is the reduction of design complexity in medium and low power applications.

ROHM offers a large range of P-channel power MOSFET voltages. Explore our product offers below.

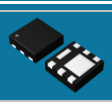
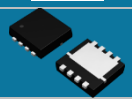
P-channel MOSFET Application areas



1. P-channel Power MOSFETs Lineup

1-1. Single P-channel (V_{DSS}=-12V to -100V)

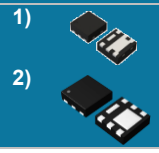
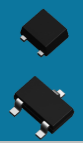
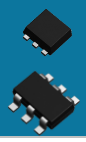
The data is sorted in ascending order of $R_{DS(on)}$.

Pin	7pin	8pin	3pin	6pin	3pin	6pin	8pin	8pin
(mm)	1.6x1.6x0.55	2.0x2.0x0.6	2.0x2.1x0.77	2.0x2.1x0.77	2.9x2.8x0.85	2.9x2.8x0.85	3.0x2.8x0.8	3.3x3.3x0.8
Package	HEML1616L7	HUML2020L8	TUMT3	TUMT6	TSMT3	TSMT6	TSMT8	HSMT8
V_{DSS}								
-12V			RAF040P01 -4A,**30mΩ** -1.5V drive Gen.4	RAL035P01 -3.5A,**42mΩ** -1.5V drive Gen.4	RQ5A040ZP -4A,**30mΩ** -1.5V drive Gen.2	RQ6A050ZP -5A,**26mΩ** -1.5V drive Gen.2	RQ7A070ZP -7A,**12mΩ** -1.5V drive Gen.2	
			RZF030P01 -3A,**39mΩ** -1.5V drive Gen.2	RAL025P01 -2.5A,**62mΩ** -1.5V drive Gen.4	RQ5A025ZP -2.5A,**61mΩ** -1.5V drive Gen.2	RQ6A045AP -4.5A,**30mΩ** -1.5V drive Gen.4	RQ7A070AP -7A,**14mΩ** -1.5V drive Gen.4	
			RZF020P01 -2A,**105mΩ** -1.5V drive Gen.2		RQ5A030AP -3A,**62mΩ** -1.5V drive Gen.4	RQ6A045ZP -4.5A,**35mΩ** -1.5V drive Gen.2	RQ7A060ZP -6A,**23mΩ** -1.5V drive Gen.2	
			RZF013P01 -1.3A,**260mΩ** -1.5V drive Gen.2		RQ5A020ZP -2A,**105mΩ** -1.5V drive Gen.2			
-20V	RW4C045BC -4.5A,**56mΩ** -1.8V drive Gen.5	RF4C100BC -10A,**15.6mΩ** -1.8V drive Gen.5		RF6C055BC -5.5A,**25.8mΩ** -1.8V drive Gen.5	RQ5C060BC -6A,**21.1mΩ** -1.8V drive Gen.5	RQ6C065BC -6.5A,**21mΩ** -1.8V drive Gen.5		RQ3C150BC -37A*,**6.7mΩ** -1.8V drive Gen.5
		RF4C050AP -10A,**26mΩ** -1.5V drive Gen.4			RQ5C035BC -3.5A,**59mΩ** -1.8V drive Gen.5	RQ6C050BC -5A,**36mΩ** -1.8V drive Gen.5		
					RQ5C030TP -3A,**75mΩ** -2.5V drive Gen.1			
					RQ5C025TP -2.5A,**95mΩ** -2.5V drive Gen.1			
					RQ5C020TP -2A,**135mΩ** -2.5V drive Gen.1			

I_D(A), $R_{DS(on)}$ max at V_{GS}=-4.5V. Lineup products, Spec subject to change. Note) *Tc=25°C

Part No.: Under development (No link. Specifications subject to change.)

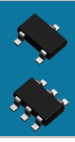
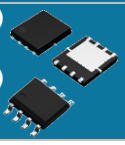
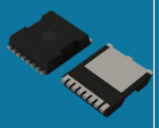
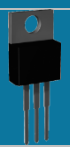
The data is sorted in ascending order of $R_{DS(on)}$.

Pin	7pin / 8pin	3pin	6pin	8pin	8pin	8pin	3pin
(mm) Package	1) 1.6x1.6x0.55 HEML1616L7	1) 2.0x2.1x0.77 TUMT3	1) 2.0x2.1x0.77 TUMT6	1) 3.0x2.8x0.8 TSMT8	5.0x6.0x1.75 SOP8	1) 5.0x6.0x1.0 DFN5060-8S	6.6x10.0x2.3 TO-252 (DPAK)
	2) 2.0x2.0x0.6 HUML2020L8	2) 2.9x2.8x0.85 TSMT3	2) 2.9x2.8x0.85 TSMT6	2) 3.3x3.3x0.8 HSMT8		2) 5.0x6.0x1.0 HSOP8	
V_{DSS}							
-30V	1) RW4E045AT -4.5A,**48mΩ** Gen.5	1) RRF015P03 -1.5A,**160mΩ** Gen.2	1) RRL035P03 -3.5A,**50mΩ** Gen.2	1) RQ7E100AT -10A,**11.2mΩ** Gen.5	RS3E180AT -18A,**5.4mΩ** Gen.5	2) RS1E260AT -80A*,**3.1mΩ** Gen.5	
	2) RF4E075AT -7.5A,**21.7mΩ** Gen.5	2) RQ5E050AT -5A,**26mΩ** Gen.5	2) RQ6E060AT -6A,**26.4mΩ** Gen.5	1) RQ7E070RP -7A,**17mΩ** Gen.2	RRH140P03 -14A,**7mΩ** Gen.2	2) RS1E220AT -76A*,**4.1mΩ** Gen.5	
		2) RQ5E040RP -4A,**45mΩ** Gen.2	2) RQ6E050AT -5A,**27mΩ** Gen.5	1) RQ7E055AT -5.5A,**24.5mΩ** Gen.5	RS3E130AT -13A,**8.5mΩ** Gen.5		
		2) RQ5E035AT -3.5A,**50mΩ** Gen.5	2) RQ6E045RP -4.5A,**35mΩ** Gen.2	1) RQ7E050RP -5A,**31mΩ** Gen.2	RRH100P03 -10A,**12.6mΩ** Gen.2		
		2) RQ5E030RP -3A,**75mΩ** Gen.2	2) RQ6E035AT -3.5A,**50mΩ** Gen.5	2) RQ3E120AT -39A*,**8mΩ** Gen.5	RRH090P03 -9A,**15.4mΩ** Gen.2		
		2) RQ5E025AT -2.5A,**91mΩ** Gen.5	2) RQ6E035SP -3.5A,**65mΩ** Gen.1	2) RQ3E100AT -31A*,**11.4mΩ** Gen.5	RS3E075AT -7.5A,**23.5mΩ** Gen.5		
		2) RQ5E025SP -2.5A,**98mΩ** Gen.1	2) RQ6E030SP -3A,**80mΩ** Gen.1	2) RQ3E075AT -18A*,**23mΩ** Gen.5	RRH050P03 -5A,**50mΩ** Gen.2		
		2) RQ5E020SP -2A,**120mΩ** Gen.1	2) RQ6E030AT -3A,**91mΩ** Gen.5		RRH040P03 -4A,**75mΩ** Gen.2		
		2) RQ5E015RP -1.5A,**160mΩ** Gen.2	2) RRQ020P03 -2A,**160mΩ** Gen.2				
-40V	2) RF4G100DT -18A*,**34mΩ** Gen.6	2) RQ5G040AT -4A,**46mΩ** Gen.5	2) RQ6G050AT -5A,**40mΩ** Gen.5	1) RQ7G080AT -8A,**18.2mΩ** Gen.5	RS3G160AT -16A,**6.2mΩ** Gen.5	1) RS7G200DT -225A**,**2.05mΩ** Gen.6	RD3G07BDT -100A**,**4.9mΩ** Gen.6
	2) RF4G060AT -6A,**40mΩ** Gen.5			2) RH6G040DT -60A**,**9.6mΩ** Gen.6		2) RS6G120DT -130A**,**3.6mΩ** Gen.6	RD3G07BAT -70A*,**7.1mΩ** Gen.5
				2) RQ3G110AT -35A*,**12.4mΩ** Gen.5		2) RS1G201AT -78A*,**5.2mΩ** Gen.5	RD3G03BAT -35A*,**19.1mΩ** Gen.5
							RD3G01BAT -15A*,**39mΩ** Gen.5
-45V		1) RSF010P05 -1A,**460mΩ** Gen.1			RSH070P05 -7A,**27mΩ** Gen.1		RD3H160SP -16A,**50mΩ** Gen.1
		2) RQ5H020SP -2A,**190mΩ** Gen.1					RD3H080SP -8A,**91mΩ** Gen.1
							RD3H045SP -4.5A,**155mΩ** Gen.1

I_D(A), $R_{DS(on)}$ max at V_{GS}=-10V. Lineup products, Spec subject to change. Note) *Tc=25°C **IDSL(A)_Silicon limit

Part No.: Under development (No link. Specifications subject to change.)

The data is sorted in ascending order of $R_{DS(on)}$.

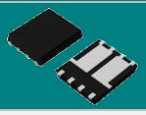
Pin	8pin	3pin / 6pin	8pin	8pin	3pin	9pin	3pin	3pin
(mm)	2.0x2.0x0.6	1) 2.9x2.8x0.85	1) 3.0x2.8x0.8	1) 5.0x6.0x1.0	6.6x10.0x2.3	9.9x11.68x2.3	10.16x15.1	10.16x29.07
Package	HUML2020L8 (DFN2020-8S)	TSMT3 2) 2.9x2.8x0.85 TSMT6	TSMT8 2) 3.3x3.3x0.8 HSMT8	HSOP8 2) 5.0x6.0x1.75 SOP8	TO-252 (DPAK)	TOLL	TO-263AB	TO-220AB
V_{DSS}		1) 2) 	1) 2) 	1) 2) 				
-60V	RF4L040AT -4A,**89mΩ** Gen.5	1) RQ5L030AT -3A,**99m** Gen.5	1) RQ7L050AT -5A,**39mΩ** Gen.5	1) RS1L151AT -56A*,**11.3mΩ** Gen.5	RD3L07BAT -70A*,**12.7mΩ** Gen.5			
		1) RQ5L015SP -1.5A,**280mΩ** Gen.1	2) RQ3L070AT -25A*,**28mΩ** Gen.5	2) RS3L110AT -11A,**12.8mΩ** Gen.5	RD3L03BAT -35A*,**41mΩ** Gen.5			
		2) RQ6L035AT -3.5A,**78mΩ** Gen.5			RD3L140SP -14A,**84mΩ** Gen.1			
		2) RQ6L020SP -2A,**210mΩ** Gen.1			RD3L01BAT -10A*,**84mΩ** Gen.5			
-80V			2) RQ3N060AT -18A*,**52mΩ** Gen.5	1) RS1N110AT -43A*,**21mΩ** Gen.5	RD3N06BAT -60A*,**26mΩ** Gen.5			
			2) RQ3N040AT -10A*,**126mΩ** Gen.5		RD3N03BAT -30A*,**56mΩ** Gen.5			
			2) RQ3N025AT -7A*,**240mΩ** Gen.5		RD3N01BAT -10A*,**141mΩ** Gen.5			
					RD3N045AT -4.5A*,**650mΩ** Gen.5			
-100V	RF4P025AT -2.5A,**260mΩ** Gen.5	1) RQ5P018AT -1.8A,**290mΩ** Gen.5	1) RQ7P035AT -3.5A,**111mΩ** Gen.5	1) RS1P090AT -33A*,**34mΩ** Gen.5	RD3P05BAT -50A*,**41mΩ** Gen.5	RJ2P14BAT -140A*,**11.5mΩ** Gen.5	RJ1P10BAT -105A*,**11.9mΩ** Gen.5	RX3P12BAT -120A*,**12.3mΩ** Gen.5
		2) RQ6P020AT -2A,**220mΩ** Gen.5	2) RQ3P045AT -14.5A*,**86mΩ** Gen.5	2) RS3P070AT -7A,**36mΩ** Gen.5	RD3P02BAT -20A*,**116mΩ** Gen.5			
		2) RQ6P015SP -1.5A,**470mΩ** Gen.1			RD3P130SP -13A,**200mΩ** Gen.1			
					RD3P01BAT -10A*,**240mΩ** Gen.5			

I_D(A), $R_{DS(on)}$ max at V_{GS}=-10V. Lineup products, Spec subject to change. Note) *Tc=25°C

Part No.: Under development (No link. Specifications subject to change.)

1-2. Dual Pch+Pch

The data is sorted in ascending order of $R_{DS(on)}$.

Pin	8pin	6pin	6pin	8pin	8pin	8pin
(mm)	2.0x2.0x0.6	2.0x2.1x0.77	2.9x2.8x0.85	3.0x2.8x0.8	5.0x6.0x1.75	5.0x6.0x1.0
Package	HUML2020L8 (DFN2020-8D)	TUMT6 (SOT-363T)	TSMT6 (SOT-457T)	TSMT8	SOP8	HSOP8
V_{DSS}						
-12V		US6J12 -2A,**105mΩ** -1.5V drive Gen.4	QS6J11 -2A,**105mΩ** -1.5V drive Gen.2	QH8J13 -5.5A,**22mΩ** -1.5V drive Gen.4		
		US6J11 -1.3A,**260mΩ** -1.5V drive Gen.2		QH8J2 -4A,**36mΩ** -1.5V drive Gen.2		
-20V	UT6JA3 -5A,**59mΩ** -1.8V drive Gen.5		QS6J1 -1.5A,**215mΩ** -2.5V drive Gen.1	QH8JA1 -5A,**38mΩ** -1.8V drive Gen.5		
	UT6J3 -3A,**85mΩ** -1.5V drive Gen.4					
-30V	UT6JA2 -4A,**70mΩ** -4.5V drive Gen.5			QH8J5 -5A,**39mΩ** -4.0V drive Gen.2	SH8J66 -9A,**18.5mΩ** -4.0V drive Gen.2	
				QH8J4 -4A,**56mΩ** -4.0V drive Gen.2	SH8J65 -7A,**29mΩ** -4.0V drive Gen.2	
					SH8J62 -4.5A,**56mΩ** -4.0V drive Gen.2	
-40V	UT6JB5 -3.5A,**122mΩ** -4.5V drive Gen.5			QH8JB5 -5A,**41mΩ** -4.5V drive Gen.5	SH8JB5 -8.5A,**15.3mΩ** -4.5V drive Gen.5	HP8JB5 -18A*,**44mΩ** -4.5V drive Gen.5
-60V	UT6JC5 -2.5A,**280mΩ** -4.5V drive Gen.5			QH8JC5 -3.5A,**91mΩ** -4.5V drive Gen.5	SH8JC5 -7.5A,**32mΩ** -4.5V drive Gen.5	HP8JC5 -14.5A*,**89mΩ** -4.5V drive Gen.5
					SH8J31 -4.5A,**70mΩ** -4.0V drive Gen.1	
-100V	UT6JE5 -1A,**840mΩ** -4.5V drive Gen.5			QH8JE5 -2A,**270mΩ** -4.5V drive Gen.5	SH8JE5 -4.5A,**91mΩ** -4.5V drive Gen.5	HP8JE5 -12.5A*,**127mΩ** -4.5V drive Gen.5

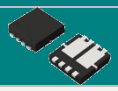
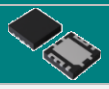
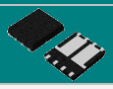
I_D(A), $R_{DS(on)}$ max at V_{GS}=-4.5V (V_{DSS}=-12V to -20V), V_{GS}=-10V (V_{DSS}=-30V to -100V). Lineup products, Spec subject to change.

Note) *Tc=25°C

Part No.: Under development (No link. Specifications subject to change.)

1-3. Dual Nch+Pch

The data is sorted in ascending order of $R_{DS(on)}$.

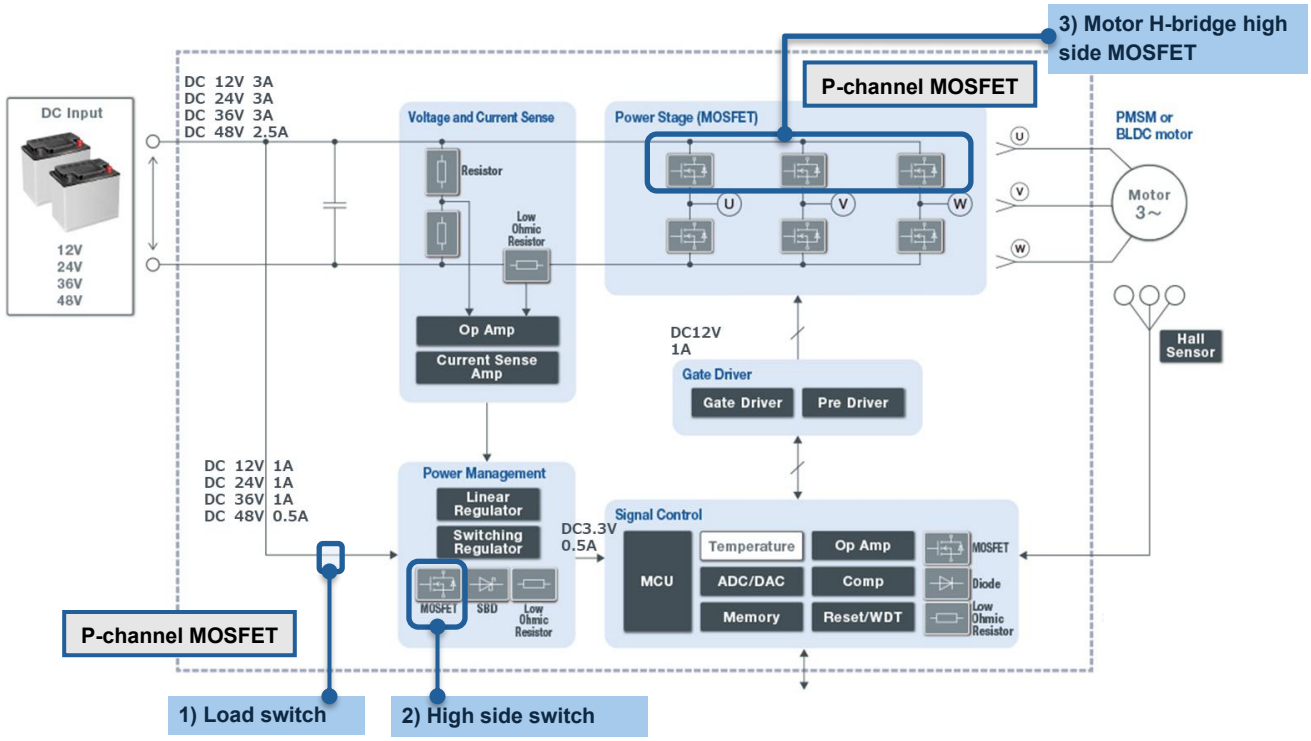
Pin	8pin	6pin	6pin	8pin	8pin	9pin	8pin	8pin
(mm)	2.0x2.0x0.6	2.0x2.1x0.77	2.9x2.8x0.85	3.0x2.8x0.8	3.3x3.3x0.75	3.3x3.3x0.75	5.0x6.0x1.75	5.0x6.0x1.0
Package	HUML2020L8 (DFN2020-8D)	TUMT6 (SOT-363T)	TSMT6 (SOT457T)	TSMT8	HSMT8	HSML3333L9 (DFN3333-9DC)	SOP8	HSOP8
V_{DSS}								
20V/-20V **20V/-12V**	UT6MA3 5.5A/-5.0A, **42mΩ/59mΩ**** Gen.5/Gen.5	US6M11 1.5A/-1.3A, **180mΩ/260mΩ**** Gen.1/Gen.2						
30V/-30V **30V/-20V**	UT6MA2 4A/-4A, **46mΩ/70mΩ** Gen.4/Gen.5	US6M2 1.5A/-1.0A, **240mΩ/390mΩ**** Gen.1/Gen.1	QS6M4 1.5A/-1.5A, **230mΩ/215mΩ**** Gen.1/Gen.1	QH8MA4 9A/-8A, **16mΩ/28.6mΩ** Gen.4/Gen.5	HT8MA5 12A/-12A*, **16.4mΩ/24.9mΩ** Gen.4/Gen.5	HS8MA2 7.0A/-5.5A, **35mΩ/80mΩ** Gen.4/Gen.5	SH8MA4 9.0A/-8.5A, **21.4mΩ/29.6mΩ** Gen.4/Gen.5	HP8MA2 18A/-15A, **9.6mΩ/17.9mΩ** Gen.4/Gen.5
		US6M1 1.4A/-1.0A, **240mΩ/390mΩ** Gen.1/Gen.1		QH8MA3 7.0A/-5.5A, **29mΩ/48mΩ** Gen.4/Gen.5			SH8MA3 7A/-6A, **28mΩ/50mΩ** Gen.4/Gen.5	
				QH8MA2 4.5A/-3.0A, **35mΩ/80mΩ** Gen.4/Gen.5			SH8MA2 4.5A/-4.5A, **80mΩ/82mΩ** Gen.4/Gen.5	
40V/-40V	UT6MB5 5.0A/-3.5A, **48mΩ/122mΩ** Gen.6/Gen.5			QH8MB5 4.5A/-5.0A, **44mΩ/41mΩ** Gen.6/Gen.5	HT8MB5 12A/-15A*, **47mΩ/44mΩ** Gen.6/Gen.5		SH8MB5 8.5A/-8.5A, **19.4mΩ/16.8mΩ** Gen.6/Gen.5	HP8MB5 16.5A/-18.0A*, **46mΩ/44mΩ** Gen.6/Gen.5
							SH8MB4 4.5A/-5.5A, **55mΩ/46mΩ** Gen.6/Gen.5	
45V/-45V							SH8M24 6A/-6A, **46mΩ/63mΩ** Gen.1/Gen.1	
60V/-60V	UT6MC5 3.5A/-2.5A, **95mΩ/280mΩ** Gen.6/Gen.5			QH8MC5 3.0A/-3.5A, **90mΩ/91mΩ** Gen.6/Gen.5	HT8MC5 10.0A/-11.5A*, **90mΩ/97mΩ** Gen.6/Gen.5		SH8MC5 6.5A/-7.0A, **32mΩ/33mΩ** Gen.6/Gen.5	HP8M31 8.5A/-8.5A, **65mΩ/70mΩ** Gen.1/Gen.1
				QH8M31 3A/-2A, **112mΩ/210mΩ** Gen.1/Gen.1			SH8M31 4.5A/-4.5A, **65mΩ/70mΩ** Gen.1/Gen.1	HP8MC5D 12A/-12A*, **90mΩ/96mΩ** Gen.6/Gen.5
							SH8MC4 3.5A/-4.0A, **95mΩ/96mΩ** Gen.6/Gen.5	HP8MC5 12A/-12A*, **90mΩ/96mΩ** Gen.6/Gen.5
80V/-80V					HT8MD5H 9.0A/-8.5A*, **112mΩ/165mΩ** Gen.6/Gen.5		SH8MD6H 6.5A/-5.5A, **37mΩ/58mΩ** Gen.6/Gen.5	HP8MD6H 18A/-18A*, **32mΩ/54mΩ** Gen.6/Gen.5
							SH8MD5H 3.5A/-3A, **116mΩ/167mΩ** Gen.6/Gen.5	
							SH8M41 3.4A/-2.6A, **130mΩ/240mΩ** Gen.1/Gen.1	
100V/-100V	UT6ME5 2A/-1A, **207mΩ/840mΩ** Gen.6/Gen.5			QH8ME5 2A/-2A, **202mΩ/270mΩ** Gen.6/Gen.5	HT8ME5 7.0A/-6.5A*, **193mΩ/280mΩ** Gen.6/Gen.5		SH8ME5 4.5A/-4.5A, **58mΩ/91mΩ** Gen.6/Gen.5	HP8ME5 8.5A/-8.0A*, **193mΩ/273mΩ** Gen.6/Gen.5
				QH8M51 2.0A/-1.5A, **325mΩ/470mΩ** Gen.1/Gen.1				HP8M51 4.5A/-4.5A, **170mΩ/290mΩ** Gen.1/Gen.1

I_D(A), $R_{DS(on)}$ max at V_{GS}=10V (**: V_{GS}=4.5V). Lineup products, Spec subject to change. Note) *Tc=25°C

Part No.: Under development (No link. Specifications subject to change.)

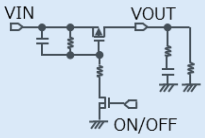
2. P-channel MOSFET applications

2-1. Motor drive: DC12V-48V Industrial

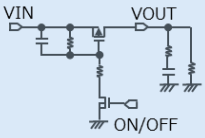


Recommended P-channel power MOSFETs

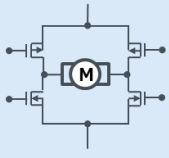
1) Load switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RW4E045AT	-30V	-4.5A	48mΩ	HEML1616L7 (DFN1616-7T)	1.6x1.6x0.55	
	RQ6G050AT	-40V	-5A	40mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	

2) High side switch

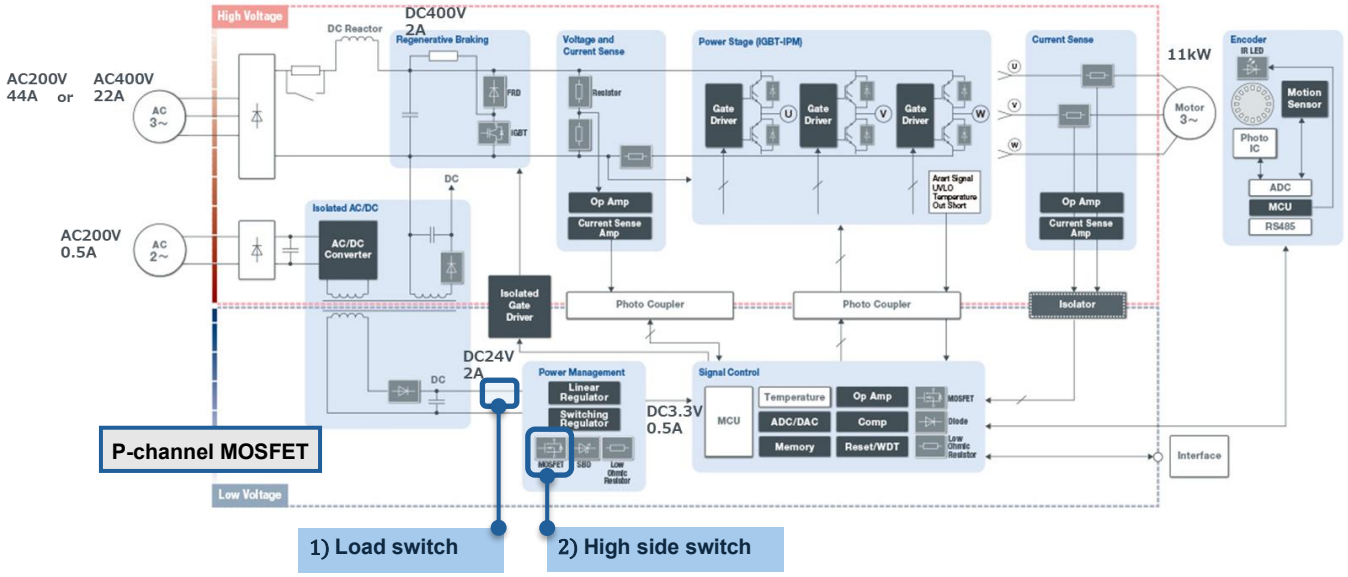
Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RS1G201AT	-40V	-78A*	5.2mΩ	HSOP8	5.0x6.0x1.0	
	RS3P070AT	-100V	-7A	36mΩ	SOP8	5.0x6.0x1.75	

3) Motor H-bridge high side MOSFET

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	
	RS3L110AT	-60V	-11A	12.8mΩ	SOP8	5.0x6.0x1.75	

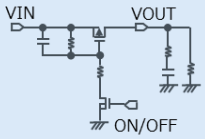
*Tc=25°C

2-2. Motor drive: 3-phase AC100V-240V AC servo

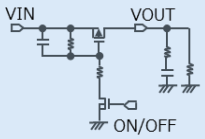
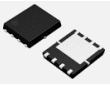


Recommended P-channel power MOSFETs

1) Load switch

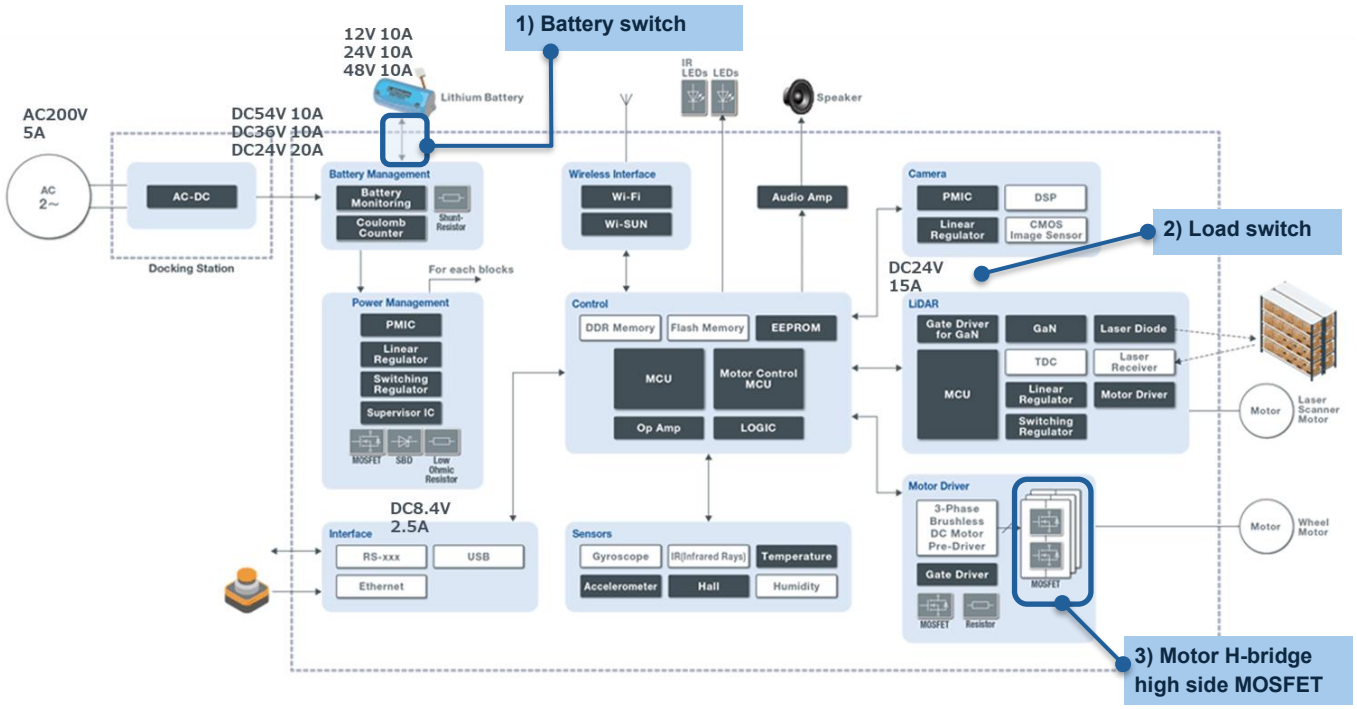
Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ6E060AT	-30V	-6A	26.4mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RQ7E100AT	-30V	-10A	11.2mΩ	TSMT8	3.0x2.8x0.8	
	RQ6G050AT	-40V	-5A	40mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	

2) High side switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RS3E180AT	-30V	-18A	5.4mΩ	SOP8	5.0x6.0x1.75	
	RS1G201AT	-40V	-78A*	5.2mΩ	HSOP8	5.0x6.0x1.0	
	RS3L110AT	-60V	-11A	12.8mΩ	SOP8	5.0x6.0x1.75	

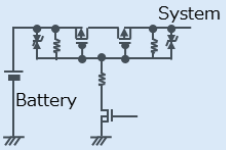
*Tc=25°C

2-3. AGV (Automatic guided vehicle)

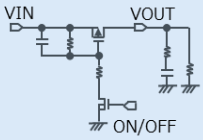
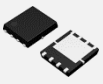


Recommended P-channel power MOSFETs

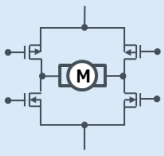
1) Battery switch (P-channel in case)

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7L050AT	-60V	-5A	39mΩ	TSMT8	3.0x2.8x0.8	
	RS3P070AT	-100V	-7A	36mΩ	SOP8	5.0x6.0x1.75	

2) Load switch

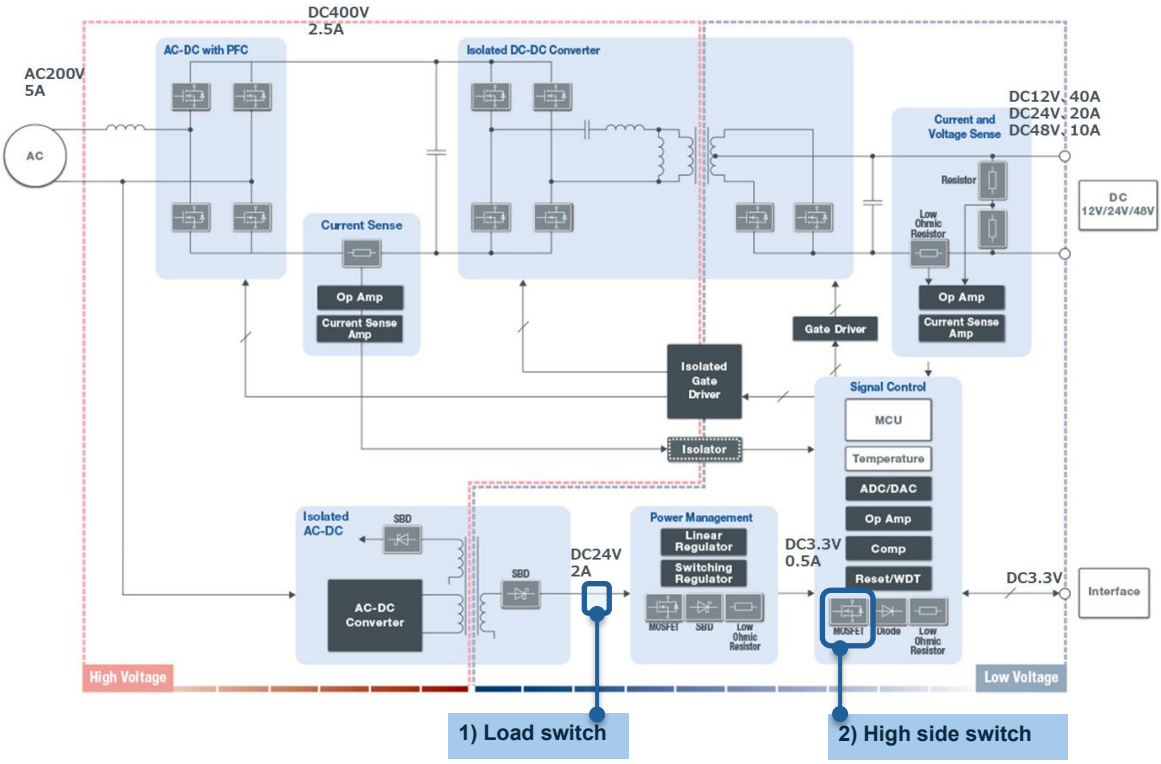
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	
	RS1N110AT	-80V	-43A*	21mΩ	HSOP8	5.0x6.0x1.0	

3) Motor H-bridge high side MOSFET

	RD3L07BAT	-60V	-70A*	12.7mΩ	TO-252 (DPAK)	6.6x10.0x2.3	
	RD3P05BAT	-100V	-50A*	41mΩ	TO-252 (DPAK)	6.6x10.0x2.3	

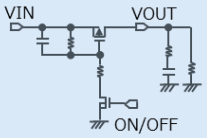
*Tc=25°C

2-4. Industrial AC/DC converter

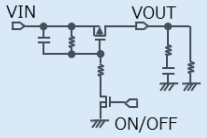
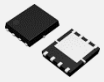


Recommended P-channel power MOSFETs

1) Load switch

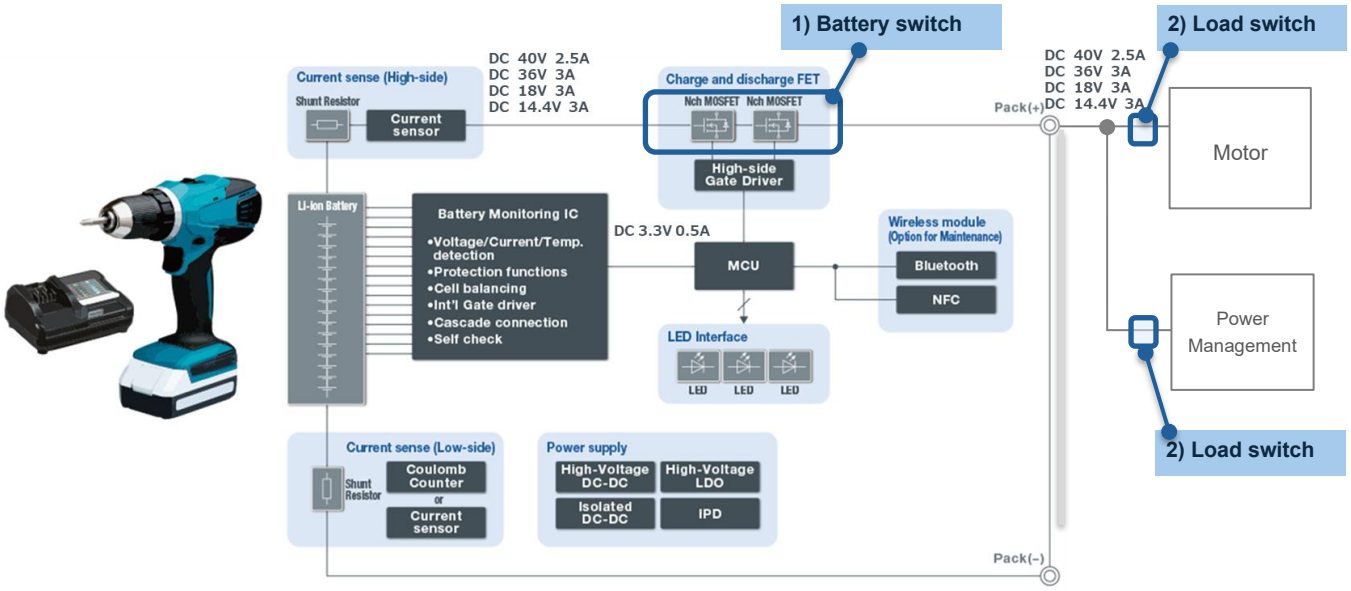
Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ6E060AT	-30V	-6A	26.4mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	
	RQ6G050AT	-40V	-5A	40mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	

2) High side switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7L050AT	-60V	-5A	39mΩ	TSMT8	3.0x2.8x0.8	
	RS1N110AT	-80V	-43A*	21mΩ	HSOP8	5.0x6.0x1.0	
	RQ3P045AT	-100V	-14.5A*	86mΩ	HSMT8	3.3x3.3x0.8	

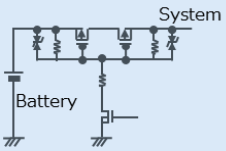
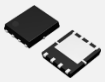
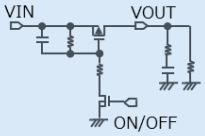
*Tc=25°C

2-5. Industrial battery management system (Battery pack)



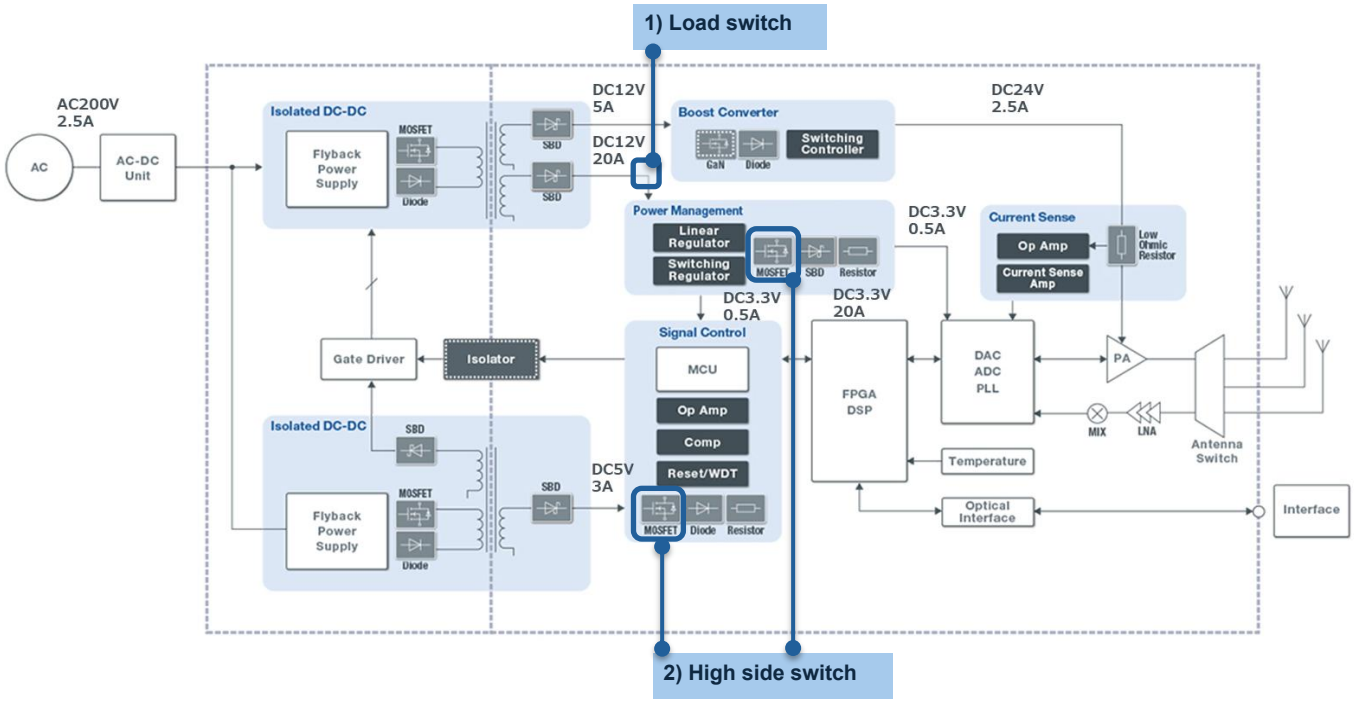
Recommended P-channel power MOSFETs

1) Battery switch (P-channel in case)

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7E100AT	-30V	-10A	11.2mΩ	TSMT8	3.0x2.8x0.8	
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	
	RS1L151AT	-60V	-56A*	11.3mΩ	HSOP8	5.0x6.0x1.0	
	RS3P070AT	-100V	-7A	36mΩ	SOP8	5.0x6.0x1.75	
2) Load switch							
	RW4E045AT	-30V	-4.5A	48mΩ	HEML1616L7 (DFN1616-7T)	1.6x1.6x0.55	
	RQ6G050AT	-40V	-5A	40mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RQ7L050AT	-60V	-5A	39mΩ	TSMT8	3.0x2.8x0.8	

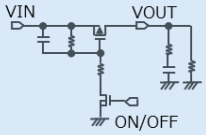
*Tc=25°C

2-6. Base Station Remote Radio Head (RRH)

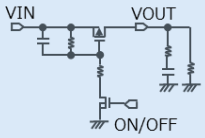


Recommended P-channel power MOSFETs

1) Load switch

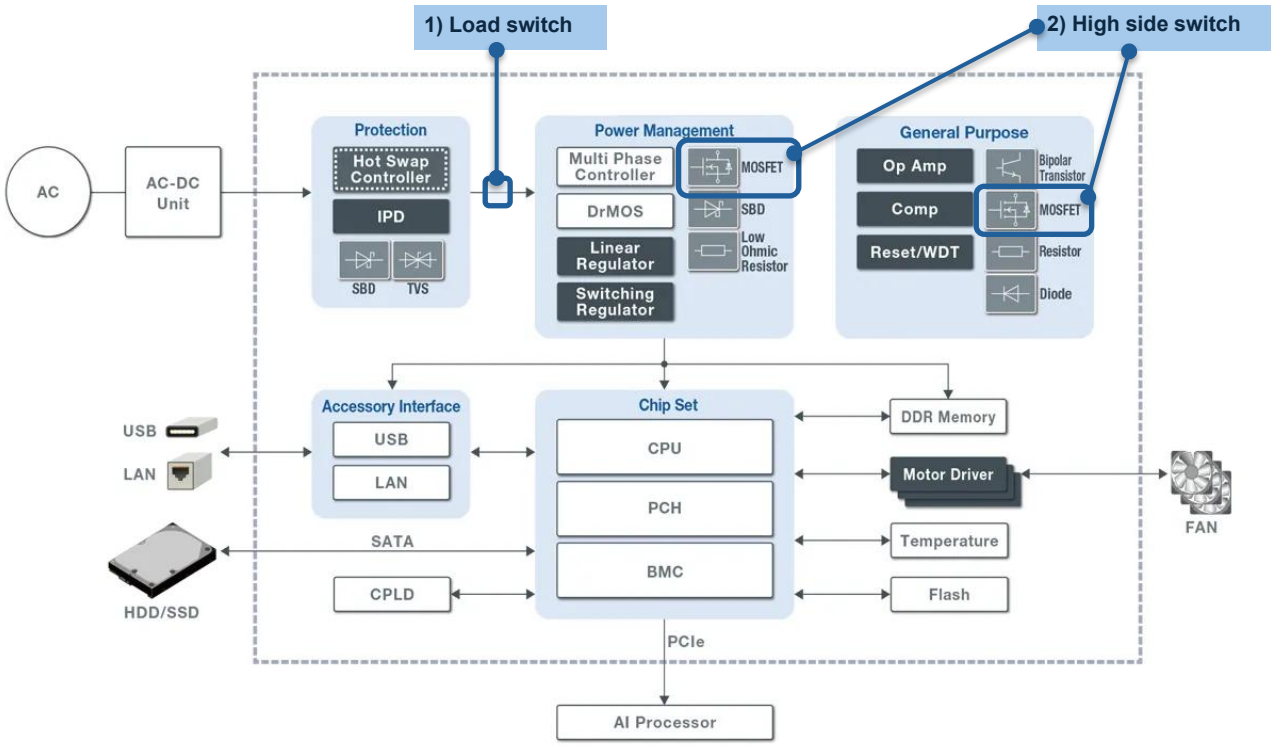
Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7E100AT	-30V	-10A	11.2mΩ	TSMT8	3.0x2.8x0.8	
	RS3G160AT	-40V	-16A	6.2mΩ	SOP8	5.0x6.0x1.75	
	RD3G07BAT	-40V	-70A*	7.1mΩ	TO-252 (DPAK)	6.6x10.0x2.3	

2) High side switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RS3E180AT	-30V	-18A	5.4mΩ	SOP8	5.0x6.0x1.75	
	RQ6G050AT	-40V	-5A	40mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RS3L110AT	-60V	-11A	12.8mΩ	SOP8	5.0x6.0x1.75	

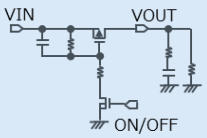
*Tc=25°C

2-7. Server Board

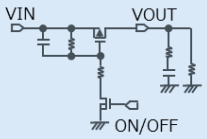


Recommended P-channel power MOSFETs

1) Load switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ7E100AT	-30V	-10A	11.2mΩ	TSMT8	3.0x2.8x0.8	
	RS3E180AT	-30V	-18A	5.4mΩ	SOP8	5.0x6.0x1.75	
	RQ7G080AT	-40V	-8A	18.2mΩ	TSMT8	3.0x2.8x0.8	
	RS3G160AT	-40V	-16A	6.2mΩ	SOP8	5.0x6.0x1.75	

2) High side switch

Circuit example	Part number	V_{DSS}	I_D	$R_{DS(on)}$ max. V_{GS}=-10V	Package	Size (mm)	
	RQ6E060AT	-30V	-6A	26.4mΩ	TSMT6 (SOT-457T)	2.9x2.8x0.85	
	RS3G160AT	-40V	-16A	6.2mΩ	SOP8	5.0x6.0x1.75	
	RQ7L050AT	-60V	-5A	39mΩ	TSMT8	3.0x2.8x0.8	

3. Nomenclature (New Products)

Single MOSFET

R S 6 E 1 2 0 B G

ROHM

Package

D3 = TO-252
F4 = DFN2020-8S (HUML2020L8)
F5 = SOT-323T (TUMT3)
F6 = SOT-363T (TUMT6)
J1 = TO-263AB (LPTL)
J2 = TOLL (TOLL-9LSATAC)
Q1 = TSMT8
Q3 = HSMT8
Q5 = SOT-346T (TSMT3)
Q6 = SOT-457T (TSMT6)
Q7 = TSMT8
S1 = HSOP8
S3 = SOP8
W4 = DFN1616-7T (HEML1616L7)
X2 = TO-220FP (TO-220FM)
X3 = TO-220AB
CuClip type)
B8 = DFN3333SD-DC
H8 = DFN3333SD
H6 = HSMT8
G5 = HSOP
G6 = HSOP8-DC
S6 = HSOP8
S7 = DFN5060-8S
Y7 = DFN8080-8S

V_{DSS}

E = 30V
G = 40V
L = 60V
N = 80V
P = 100V
R = 150V

I_D

010 = 1.0A
: :
100 = 10A
: :
250 = 25A
01B = 10A
: :
03B = 35A
04B = 40A
: :
07B, 07C = 70A
10B = 105A
12B = 120A
18B = 180A
CuClip type)
040 = 40A
: :
200 = 200A

Specification / Drive voltage

Nch)
AJ = Gen.5 Nch / 2.5V
BG = Gen.6 Nch / 4.5V
BH = Gen.6 Nch / 6V
BM = Gen.6 Nch (WideSOA) / 10V
CG = Gen.7 Nch / 4.5V
CH = Gen.7 Nch / 6V, 8V
UN = Gen.1 Nch / 1.5V
XN = Gen.3 Nch / 4V
Pch)
AT = Gen.5 Pch / 4.5V, 6.0V
BC = Gen.5 Pch / 1.8V
DT = Gen.6 Pch / 4.5V

Dual MOSFET

H T 8 K E 6 (H)

Package	Pin quantity	Polarity	V_{DSS}	Serial No.	Specification
HP8 = HSOP8		J = Pch + Pch	A = 30V		D = ESD protection
HS8 = HSML3030L10		K = Nch + Nch	B = 40V		H = High drive / 6V drive
HS8 = DFN3333-9DC		M = Nch + Pch	C = 60V		
HT8 = HSMT8D (HSMT8)			D = 80V		
QH8 = TSMT8			E = 100V		
QS5 = SOT-25T (TSMT5)			F = 150V		
QS6 = SOT-457T (TSMT6)					
QS8 = TSMT8					
SH8 = SOP8					
US5 = SOT-353T (TUMT5)					
US6 = SOT-363T (TUMT6)					
UT6 = DFN2020-8D (HUML2020L8)					

Link to Transistor Part Number Information

Contact Information

For inquiries regarding our products or services, please contact your sales representative or reach us through our website below.

Contact Us | ROHM Co., Ltd.

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