

Ideal for DC/DC converters and load switch circuits

30V Medium Power MOSFETs



HS8K/HP8K/HP8S/RF4E/RQ3E/RS1E Series

New process technology

New processes adopted for significantly improved efficiency

FOM (Ron×Qgd)
Reduced
50%

Integrated heat dissipation plate

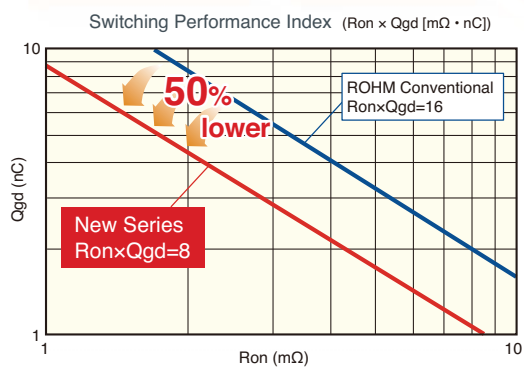
Bottom heat sink configuration ensures superior heat dissipation

Dual-element design

Built-in High-/Low-Side elements minimize wiring inductance

Low ON Resistance and Capacitance

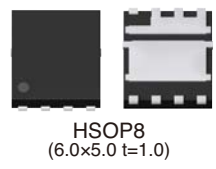
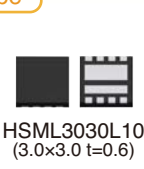
ROHM's proprietary low capacitance design¹ reduces FOM² (Ron x Qgd) by 50% compared with conventional solutions



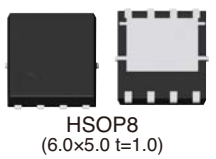
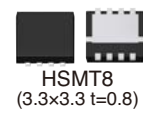
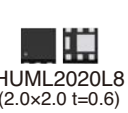
¹ Trench-type field plate structure Reduces ON resistance and improves capacitance (a weakness of conventional trench structures)
² FOM Performance index of power MOSFETs - the lower the number the better the performance

5 High Heat Dissipation Packages

Dual Type

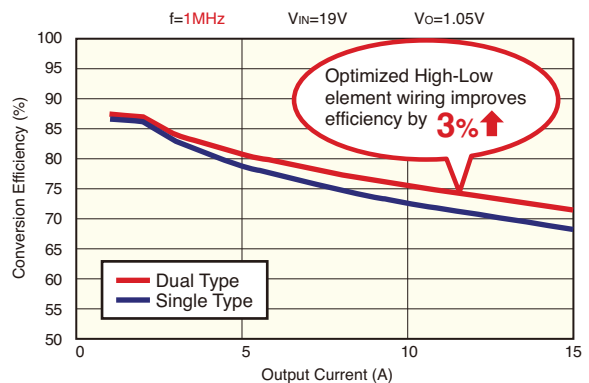
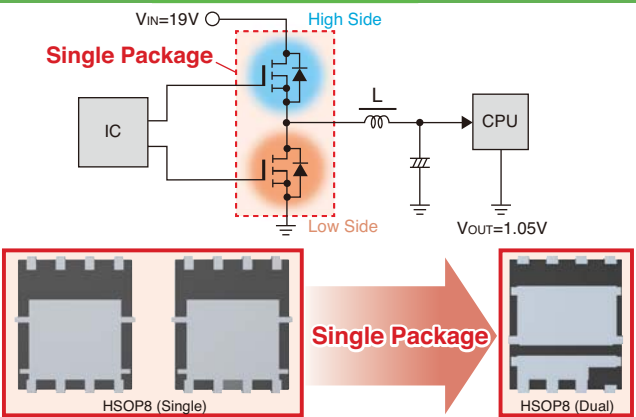


Single Type



High-Low Wiring Inductance Minimized for Greater Efficiency (HS8K/HP8K/HP8S Series)

Dual-Type



Application Examples



Tablet PCs



Notebook PCs



Desktop PCs



Servers

...and other devices using DC/DC modules

Medium Power MOSFETs (High Power Package) for DC/DC Converters and Load Switch Circuits

Package	Applications	Part No.	Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (Ta=25°C)	R _{bs(on)} Typ. (mΩ)		Q _g (nC) (V _{Gs} =5V)	Drive Voltage (V)						
							4.5	10								
HSML3030L10 (Dual Type) 	DC/DC	New HS8K1	N+N	30	11	2	11.9	9.1	3.3	4.5						
				30	10		14.7	11.2	2.7							
HSOP8 (Dual Type) 	DC/DC Converter Switching	New HP8K22	N+N	30	20	3	4.7	3.6	7.8	4.5						
				30	12		9.1	6.7	4.8							
		☆ HP8K23	N+N	30	24		3.3	2.6	11.2							
				30	12		9.1	6.7	4.8							
		☆ HP8K24	N+N	30	32		2.4	1.9	16.9							
				30	12		9.1	6.7	4.8							
New HP8S36	N N+SBD	30	32	2.3	2	47										
		30	12	9.1	6.7	4.8										
HUML2020L8 (Single Type) 	Load Switching	RF4E110BN	N	30	11	2	11.8	8.5	12 ^{*1}	4.5						
		RF4E080BN		30	8		18.9	13.5	7.2 ^{*1}							
		RF4E070BN		30	7		30.8	22	4.6 ^{*1}							
	DC/DC Converters	RF4E110GN	N	30	11	2	11.7	8.7	4.8 ^{*1}	4.5						
				RF4E080GN	30		8	17.6	13.5		2.8 ^{*1}					
				RF4E070GN	30		7	23	16.4		2.3 ^{*1}					
HSMT8 (Single Type) 	Load Switching	RQ3E180BN	N	30	18	2	3.7	2.8	37 ^{*1}	4.5						
		RQ3E150BN		30	15		5.3	3.8	23 ^{*1}							
		RQ3E130BN		30	13		6.7	4.4	16 ^{*1}							
		RQ3E120BN		30	12		8.6	6.6	14 ^{*1}							
		RQ3E100BN		30	10		11	7.7	10.5 ^{*1}							
		RQ3E080BN		30	8		16	11	7.2 ^{*1}							
		RQ3E070BN		30	7		29	20	4.6 ^{*1}							
	DC/DC Converter Switching	RQ3E180GN	N	30	18	2	4.3	3.3	11.6 ^{*1}	4.5						
				30	15		6.2	4.7	7.4 ^{*1}							
				30	12		9.1	6.7	4.8 ^{*1}							
				30	10		12	8.9	3.9 ^{*1}							
				30	8		17.5	12.9	2.8 ^{*1}							
				HSOP8 (Single Type) 	Load Switching		RS1E350BN	N	30		35	3	1.8	1.2	95	4.5
							RS1E280BN		30		28		2.3	1.7	50	
RS1E240BN	30	24	3.3			2.3	35									
RS1E200BN	30	20	3.8			2.8	29									
RS1E180BN	30	18	4.9			3.5	23									
DC/DC Converter Switching	RS1E350GN	N	30		35	3	1.5	1.2	28.6	4.5						
			30		32		1.8	1.4	19.6							
			30		30		2.2	1.7	18.5							
			30		28		2.6	2	17.1							
			30		24		3.3	2.6	11.2							
RS1E240GN	30	24	4.7	3.6	7.8											
RS1E200GN	30	20	6.7	5.1	5.9											
RS1E170GN	30	17	8.8	6.7	4.8											
RS1E150GN	30	15	11.7	8.9	3.9											
RS1E130GN	30	13														

*1: V_{Gs}=4.5V ☆ Under development

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