

POWER MANAGEMENT DEVICES

NEC ELECTRONICS AMERICA

Key Features

- › Extremely low on-state resistance
- › Thin high-power HVSON package
- › World class RDS(ON) in both N-channel and P-channel
- › VDSS/VGSS available at 30V/20V and 35V/25V

Applications

Li-ion battery protection for notebook PCs and load switching

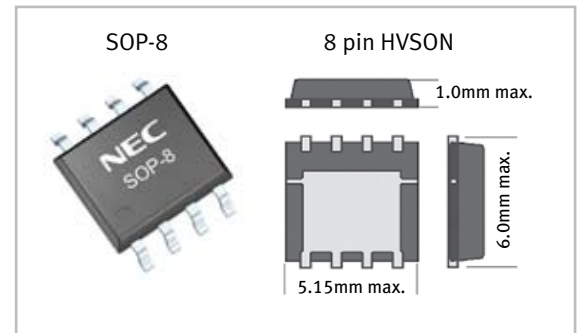
Power MOSFETs for Li-ion Battery Protection in Notebook PCs

μPA27xx Series

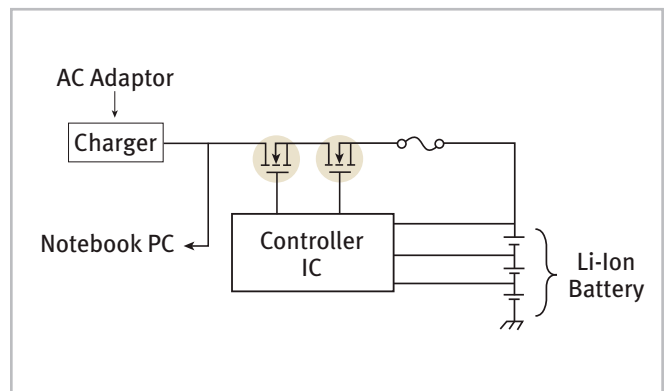


Defeating heat in a small package, this series of power MOSFETs from NEC Electronics handles battery protection tasks and is well suited for notebook PCs. Low RDS(ON) minimizes power dissipation and an HVSON package trims device thickness to just 1 millimeter (mm). With the configuration of the HVSON package, part of the device's lead frame connects directly to the circuit board for efficient heat dissipation. This series also offers battery protection MOSFETs in the common SOP-8 package.

Designed to provide protection for battery applications, the UPA27xx Series prevents heat generation and explosions that may result from Li-ion battery over-current. The N-channel MOSFETs within this series have a VDSS of 30V with RDS(ON) as low as 2.5 mohm max. at a VGS of 10V (Id =33A). The P-channel MOSFETs within this series have a VDSS of -30V with RDS(ON) as low as 3.3 mohm max. at a VGS of -10V (Id =20A)



Li-ion Battery



NEC Electronics Part Number	Polarity	Package	VDSS (V)	VGSS (V)	ID (DC) (A)	ID (pulse) (A)	RDS(on) (Max)			Ciss (pF)	Qg (nC) Vgs @5V
							@10V mohm	@4.5V mohm	@2.5V mohm		
μ PA2723UT1A	N-ch	8 pin HVSON	30	+/-20	+/-33	+/-200	2.5	3.5		8100	23
μ PA2743T1A			30	+/-20	+/-29	+/-170	3.3	4.6		5080	39
μ PA2721AGR		8 pin SOP	30	+/-20	+/-19	+/-200	4.3	10		7100	52
μ PA2720AGR			30	+/-20	+/-14	+/-150	6.6	14		3600	28
μ PA2742GR			35	+/-25	+/-17	+/-150	4.8	8		4600	43
μ PA2731UT1A	P-ch	8 pin HVSON	-30	+/-20	+/-44	+/-180	3.3	6.4		3620	149
μ PA2732UT1A			-30	+/-20	+/-40	+/-160	3.7	6.7		3260	133
μ PA2716AGR		8 pin SOP	-30	+/-20	+/-14	+/-140	7.0	11.3		3000	95

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