

Reliable and Highly Efficient for a Range of Applications

Renesas offers rugged, low $R_{DS(on)}$, low Q_{gd} power MOSFETs optimized for heavy duty applications like brushed and brushless motor drives, synchronous rectification in AC-DC power supplies, and renewable energy applications such as solar DC-DC converters. For 30V industrial applications, Renesas has a compact 5mm x 6mm FET family that supports $R_{DS(on)}$ below 1 mOhm, and for 30V to 100V, Renesas offers these devices in industry-standard TO220 and D2pak packages.

Key Features and Target Applications

- Wide range of package options available (surface mount and through hole)
- Robust current handling capability, up to 110 A
- Excellent package thermals => lower device operating temperature
- Excellent Avalanche energy capabilities
- Robust Body Diode dv/dt capability

Target Applications

- Synchronous Rectifiers in Telecom and Server power supplies
- Power Tool motor drives
- Solar DC-DC converters
- E-bikes and general-purpose industrial motor drives



LV Industrial Power MOSFETs

Key Competition Benchmarking

Manufacturer	P/N	BVdss (V)	Id + (A)	Rdson,max* (mOhm)	Qg ,typ# (nC)	Eas (mJ)
Renesas	uPA2766T1A	30	130	0.99	288	608
A	x	30	100	1.4	120	420
B	y	30	100	1.1	72	190
C	z	30	50	1.8	58	126

Key specifications comparison from respective product datasheets.

Product Matrix

P/N	VDSS [V]	ID [A]	Rdson,max @ 10 V [mOhm]	Qg [nC]	Qgd [nC]	Package	Target Applications
N0413N	40	100	3.3	97	31	TO-263	Motor Control: Power Tools, Pump/Fan Drives, etc.
N0601N	60	100	4.2	148	76	TO-263	
RJK0602DPN	60	100	3.9	90	16	TO-220	
RJK0603DPN	60	80	5.2	57	10	TO-220	
RJK0701DPN	75	100	3.8	140	21	TO-220	Power Supplies (Sync Rectifier FETs): Telecom, Servers, Adapters
RJK0702DPN	75	90	4.8	89	13	TO-220	
RJK0703DPN	75	70	6.7	56	8	TO-220	
RJK1001DPN	100	80	5.5	147	45	TO-220	
RJK1002DPN	100	70	7.6	94	19	TO-220	
RJK1003DPN	100	50	11	59	12	TO-220	

Note: Part numbers are available in multiple package options such as T0262, T0263, T0220, and T0220FP. Please check respective product datasheet for details.

Support and Collateral

Fully characterized datasheets, application notes, design tools available at: <http://am.renesas.com/products/discrete/pmosfet>

For additional information contact:
http://am.renesas.com/tech_support



Renesas Electronics America Inc. | www.renesas.com
2880 Scott Boulevard, Santa Clara, CA 95050-2554 | Phone: 1 (408) 588-6000

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