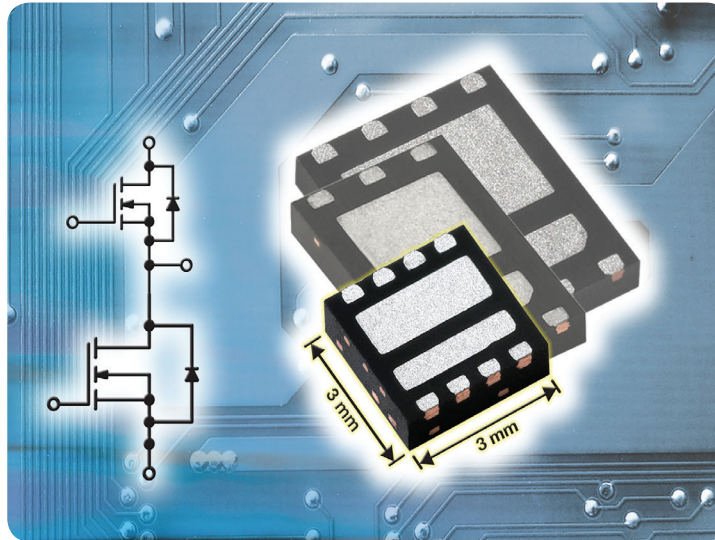


Co-Packaged MOSFETs Reduce Space, Increase Performance Over Two Discretes



KEY BENEFITS

- High- and low-side MOSFETs in one compact package
- Three choices of size:
 - 6 mm x 5 mm
 - 6 mm x 3.7 mm
 - 3 mm x 3 mm
- On-resistance down to 1.3 mΩ
- Maximum current up to > 40 A
- Lowers solution space compared to two discrete MOSFETs, saving clearance and labeling space
- Simplifies layout
- Reduces parasitic inductance from PCB traces, increasing efficiency and reducing ringing

APPLICATIONS

- System power, POL, low-current DC/DC, and synchronous buck in notebooks
- VRMs
- Power modules
- Graphics cards
- Servers
- Gaming consoles
- Notebook PCs
- Telecom equipment

RESOURCES

Datasheets: <http://www.vishay.com/mosfets/powerpair-6-37-package/>
<http://www.vishay.com/mosfets/powerpair-6-5-package/>
<http://www.vishay.com/mosfets/powerpair-3x3-package/>

Technical Support: pmstechsupport@vishay.com

More featured products: <http://www.vishay.com/landingpage/tradeshows/powermanagement/2011/mosfets.html>

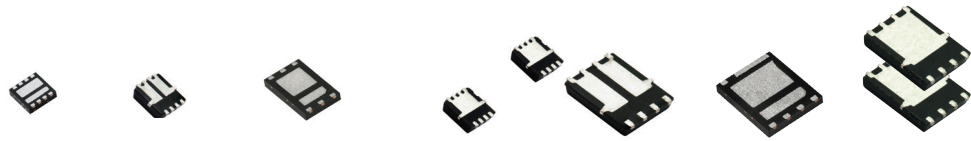




POWER MOSFETs

PowerPAIR®

PowerPAIR® COMPARISON



PowerPAIR® COMPARISON							
	PowerPAIR 3 X 3	PowerPAK® 1212-8 Dual	PowerPAIR® 6 X 3.7	2 PowerPAK 1212-8 Singles	PowerPAK SO-8 Dual	PowerPAIR 6 X 5	2 PowerPAK SO-8 Singles
Approximate size (mm ²)	9	11	22	22 + spacing	30	30	60 + spacing
Approximate lowest max on-resistance (mΩ)	5.1	20	3.9	2.15	< 5.6	1.3	1
Approximate highest max current (A) T _A = 25 °C	22.6	8.8	26.4	31	20	40	58
Approximate highest max current (A) T _A = 70 °C	18.1	7	22.1	28	16**	39	47
Reference	SiZ340DT	Si7228DN	SiZ730DT	SiSA04DN	Si7994DP	SiZ916DT	SiRA00DP

* Target Specification

** T_A = 85 °C

Part Number	Ch	V _{DS} (V)	V _{GS} (V)	R _{DS(on)} (Ω) Max.		Q _g (nC) Typ.		Q _{GS} Typ. (nC)	Q _{GD} Typ. (nC)	I _D (A)		R _θ Typ. (Ω)	FOM @ 4.5 V Typ.	Samples		
				V _{GS} = 10 V	V _{GS} = 4.5 V	V _{GS} = 10 V	V _{GS} = 4.5 V			T _A = 25 °C	T _A = 70 °C					
Asymmetric Dual N																
PowerPAIR	3 x 3	SiZ340DT	1	30	20	0.0095	0.0137	12.3	5.6	2.3	1	15.6	12.4	1.7	62	Available
			2	30	20	0.0051	0.007	22.6	10.1	4.2	1.8	22.6	18.1	1.3	59	
	6 x 3.7	SiZ710DT	1	20	20	0.0068	0.009	11.5	6.9	2.4	1.7	16.0	15.0	1.3	50	Available
			2	20	20	0.0033	0.0043	38	18.2	6.6	4.8	30.0	24.0	0.8	62	
		SiZ728DT	1	25	20	0.0077	0.011	17	8.1	3	2.5	16.0	14.2	1	97	Available
			2	25	20	0.0035	0.0048	42.5	20.5	7.7	6.4	28.8	23.0	0.8	19	
	SiZ730DT	1	30	20	0.0093	0.013	15.6	7.7	2.6	3	12.9	10.3	1	137	Available	
		2	30	20	0.0039	0.0053	43	21.2	7	7.4	26.4	21.1	0.8	23		
	6 x 5	SiZ916DT	1	30	20	0.0064	0.01	17	7.2	3.6	0.94	16	15.5	2.5	80	Available
			2	30	20	0.0013	0.00175	106	45	23.2	5	40	38.8	1	2	
		SiZ920DT	1	30	20	0.0071	0.0089	22.3	10.5	5.1	2.8	32	17	1.6	66	Available
			2	30	20	0.003	0.0035	60	29	10	9.5	32	26	0.6	10	
		SiZ918DT	1	30	20	0.012	0.0145	14	6.8	2.6	1.9	14.3	11.4	2	174	Available
			2	30	20	0.0037	0.0045	14	6.8	2.6	1.9	26.0	21.0	1.1	16	
		SiZ900DT	1	30	20	0.0072	0.0092	29	13.5	5.8	3.1	19	15.5	2.4	69	Available
			2	30	20	0.0039	0.0047	73	34	15	7.3	28	22	0.9	18	
SiZ902DT		1	30	20	0.012	0.0145	14	6.8	2.6	1.9	14.3	11.4	2	174	Available	
		2	30	20	0.0064	0.0083	43	21	8.1	6.5	16	16	1.5	56		
SiZ904DT	1	30	20	0.024	0.03	8	3.8	1.4	1.1	9.5	7.6	3.2	720	Available		
	2	30	20	0.0135	0.017	15.4	7.3	2.3	2.2	14.5	11.6	0.8	230			
Asymmetric Dual N Plus Integrated Schottky																
PowerPAIR	6 x 3.7	SiZ790DT	1	30	20	0.0093	0.013	15.6	7.7	2.6	3	12.9	10.3	1	137	Available
			2	30	20	0.0047	0.0059	36	17	5.7	5	23.4	18.7	0.9	28	
	6 x 5	SiZ914DT	1	30	20	0.0064	0.01	17	7.2	3.6	0.94	16	15.5	2.5	80	Available
	2	30	20	0.00137	0.00194	66	30.1	10.9	3.8	40	38.8	1	3			

For a latest list of devices, visit <http://www.vishay.com/mosfets/powerpair-package/>