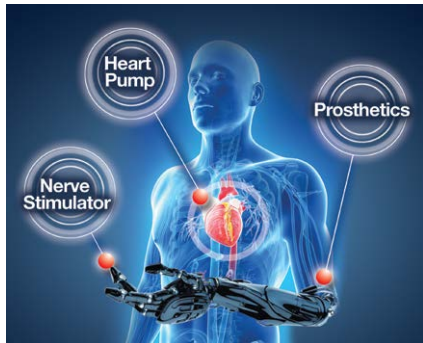


eGaN® FETs and ICs for Medical Technology

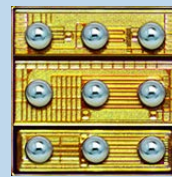


Wireless Power for Implantable Devices



On-patient wireless power applications

eGaN Technology



EPC2107
100 V, 0.5 A
Die size: 1.35 x 1.35 mm

Benefits

eGaN FET's switching speed enables wireless power transfer for implanted devices which eliminates the need for through-skin cables, reducing the mortality rate while making it possible for patients to maintain a quality of life

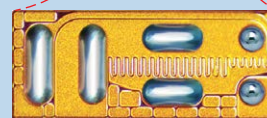
Imaging Equipment and Diagnostics



Image resolution is critical to MRI scanners

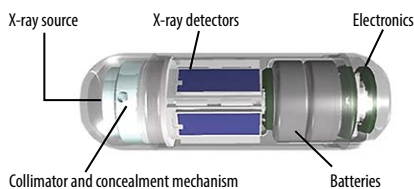


MRI Receive coil using **EPC8004** courtesy of Case Western University



EPC8004
40 V, 7.5 A
Die size: 2.1 x 0.8 mm

eGaN FETs provide improved scanning speed allowing more coils to be employed, thus reducing distortion of the magnetic field and decreasing overall power consumption for imaging equipment



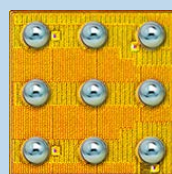
Non-invasive "colonoscopy pill" from Check-Cap Ltd



EPC2012C
200 V, 22 A
Die size: 1.7 x 0.9 mm

eGaN FET's high frequency switching increases performance of X-Ray based diagnostic systems and the FET's extremely small chip-scale packaging enables high energy density

Robotics



EPC2039
80 V, 50 A
Die size: 1.35 x 1.35 mm

GaN's small size, thermal efficiency, and high frequency switching contribute to high-resolution motor control for medical robotics

Recommended Devices for Medical Technology

Recommended Devices by Application

Part Number	Configuration	V _{DS} (V)	Max R _{DS(on)} (mΩ) @ 5V _{GS}	Q _G typ (nC)	Q _{GS} typ (nC)	Q _{GD} typ (nC)	Q _{OSS} typ (nC)	Q _{RR} (nC)	I _D (A)	Pulsed I _D (A)	Package (mm)	Development Board	Implantable		Medical Imaging and Diagnostics	Robotics
													PSU*	WiPo**		
EPC8004	Single	40	110	0.37	0.12	0.047	0.63	0	4	7.5	LGA 2.05 x 0.85	EPC9024				
EPC2014C	Single	40	16	2	0.7	0.3	4	0	10	60	LGA 1.7 x 1.1	EPC9005C				
EPC2015C	Single	40	4	8.7	2.7	1.2	19	0	53	235	LGA 4.1 x 1.6	EPC9001C				
EPC2108	Dual	60	240	0.24	0.106	0.047	0.71 0.93	0	1.7	5.5	BGA 1.35 x 1.35	EPC9064				
	Sync Boot		3300	0.044	0.02	0.004	0.134		0.5	0.5						
EPC2035	Single	60	45	0.88	0.25	0.16	2.6	0	1.7	24	BGA 0.9 x 0.9	EPC9049				
EPC8002	Single	65	480	0.133	0.057	0.015	0.344	0	2	2	LGA 2.05 x 0.85	EPC9022				
EPC8009	Single	65	130	0.37	0.12	0.055	0.94	0	4	7.5	LGA 2.05 x 0.85	EPC9029				
EPC2039	Single	80	25	1.91	0.76	0.42	7.64	0	6.8	50	BGA 1.35 x 1.35	EPC9057				
EPC2107	Dual	100	390	0.19	0.077	0.041	0.9 1.25	0	1.7	3.8	BGA 1.35 x 1.35	EPC9063				
	Sync Boot		3300	0.044	0.02	0.004	0.134		0.5	0.5						
EPC2037	Single	100	550	0.115	0.032	0.025	0.6	0	1.7	2.4	BGA 0.9 x 0.9	EPC9087				
EPC8010	Single	100	160	0.36	0.13	0.06	2.2	0	4	7.5	LGA 2.05 x 0.85	EPC9030				
EPC2036	Single	100	73	0.7	0.17	0.14	3.9	0	1.7	18	BGA 0.9 x 0.9	EPC9050				
EPC2106	Half Bridge	100	70	0.73	0.24	0.140	3.96 4.68	0	1.7	18	BGA 1.35 x 1.35	EPC9055				
EPC2007C	Single	100	30	1.6	0.6	0.3	8.3	0	6	40	LGA 1.7 x 1.1	EPC9006C				
EPC2051	Single	100	25	1.7	0.6	0.3	7.3	0	1.7	37	BGA 1.3 x 0.85	EPC9091				
EPC2016C	Single	100	16	3.4	1.1	0.55	16	0	18	75	LGA 2.1 x 1.6	EPC9010C				
EPC2045	Single	100	7	5.9	1.9	0.8	25	0	16	130	BGA 2.5 x 1.5	EPC9078				
EPC2001C	Single	100	7	7.5	2.4	1.2	31	0	36	150	LGA 4.1 x 1.6	EPC9002C				
EPC2110	Dual Common Source	120	110	0.8	0.25	0.18	4	0	3.4	20	BGA 1.35 x 1.35	EPC9058				
EPC2012C	Single	200	100	1	0.3	0.2	10	0	5	22	LGA 1.7 x 0.9	EPC9004C				
EPC2010C	Single	200	25	3.7	1.3	0.7	40	0	22	90	LGA 3.6 x 1.6	EPC9003C				

Note: Table data subject to change. Please refer to the Product section on www.epc-co.com.

*PSU = Power Supply Unit
**WiPo = Wireless Power

Design Support Materials @ www.epc-co.com

Books

GaN Transistors for Efficient Power Conversion Textbook
Wireless Power Handbook – Second Edition
DC-DC Converter Handbook

Design Support

MedTech
DC-DC Power Conversion
Wireless Power
Chip-Scale Packaging
Videos

Evaluation Kits

EPC9111 – 35 W, Wireless Power Demo Kit
EPC9112 – 50 W, Wireless Power Demo Kit
EPC9113 – 16 W, Class 3, ZVS Class-D Wireless Power System
EPC9114 – 10 W, Class 2, ZVZ Class-D Wireless Power System
EPC9121 – 33 W, Class 4, ZVS Class-D Wireless Power System
EPC9003C – 200 V, 5 A Development Board
EPC9024 – 40 V, 4.4 A Development Board
Demo Boards

For More Information

Please contact info@epc-co.com or your local sales representative

Visit our website: epc-co.com

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