CDM22011-600LRFP

N-CHANNEL
LR POWER MOSFET
11 AMP, 600 VOLT

ULTRAMOS™



TO-220FP CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CDM22011-600LRFP is a 600 volt N-Channel MOSFET designed for high voltage, fast switching applications such as Power Factor Correction (PFC), lighting and power inverters. This UltraMOS™ MOSFET combines high voltage capability with ultra low $r_{DS(ON)}$, low threshold voltage, and low gate charge for optimal efficiency.

MARKING CODE: CDM11-600LR

APPLICATIONS:

- Power Factor Correction
- Alternative energy inverters
- Solid State Lighting (SSL)

FEATURES:

- High voltage capability (V_{DS}=600V)
- Low gate charge (Q_{gs}=4.45nC TYP)
- Ultra low $r_{DS(ON)}$ (0.3Ω TYP)

MAXIMUM RATINGS: (T_C=25°C unless otherwise noted)

	SYMBOL		UNITS
Drain-Source Voltage	V_{DS}	600	V
Gate-Source Voltage	V_{GS}	30	V
Continuous Drain Current (Steady State)	I_D	11	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	44	A
Continuous Source Current (Body Diode)	I_S	11	A
Maximum Pulsed Source Current (Body Diode)	I_{SM}	44	A
Single Pulse Avalanche Energy (Note 1)	E_{AS}	280	mJ
Power Dissipation	P_D	25	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	°C
Thermal Resistance	Θ_{JC}	5.0	°C/W
Thermal Resistance	Θ_{JA}	120	°C/W

Note 1: L=30mH, I_{AS}=4.0A, V_{DD}=100V, R_G=25Ω, Initial T_J=25°C

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	V_{GS}=30V, V_{DS}=0			100	nA
I_{DSS}	V_{DS}=600V, V_{GS}=0		0.047	1.0	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	600			V
$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	2.0	3.09	4.0	V
V_{SD}	V_{GS}=0, I_S=11A		0.92	1.4	V
$r_{DS(ON)}$	V_{GS}=10V, I_D=5.5A		0.30	0.36	Ω
C_{rss}	V_{DS}=100V, V_{GS}=0, f=1.0MHz		2.76		pF
C_{iss}	V_{DS}=100V, V_{GS}=0, f=1.0MHz		763		pF
C_{oss}	V_{DS}=100V, V_{GS}=0, f=1.0MHz		52		pF

R4 (19-August 2015)

CDM22011-600LRFP

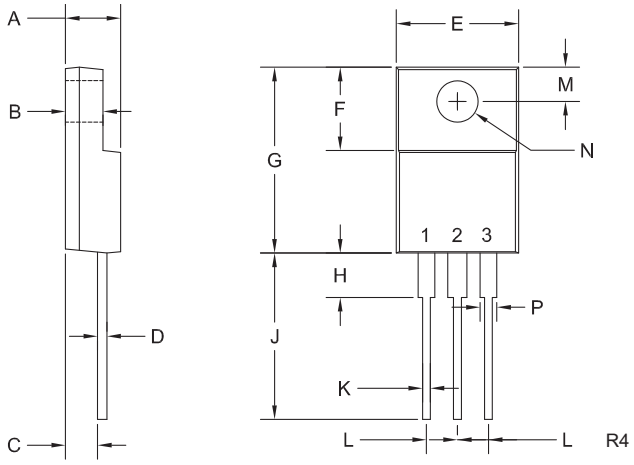
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ELECTRICAL CHARACTERISTICS - Continued: (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	UNITS
$Q_{g(tot)}$	V_{DS}=480V, V_{GS}=10V, I_D=11A (Note 2)	23.05	nC
Q_{gs}	V_{DS}=480V, V_{GS}=10V, I_D=11A (Note 2)	4.45	nC
Q_{gd}	V_{DS}=480V, V_{GS}=10V, I_D=11A (Note 2)	11.31	nC
$t_{d(on)}$	V_{DD}=300V, V_{GS}=10V, I_D=11A, R_G=25Ω (Note 2)	11	ns
t_r	V_{DD}=300V, V_{GS}=10V, I_D=11A, R_G=25Ω (Note 2)	27	ns
$t_{d(off)}$	V_{DD}=300V, V_{GS}=10V, I_D=11A, R_G=25Ω (Note 2)	37	ns
t_f	V_{DD}=300V, V_{GS}=10V, I_D=11A, R_G=25Ω (Note 2)	23	ns
t_{rr}	V_{GS}=0, I_S=11A, di/dt=100A/μs (Note 2)	315	ns
Q_{rr}	V_{GS}=0, I_S=11A, di/dt=100A/μs (Note 2)	4.0	μC

Note 2: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

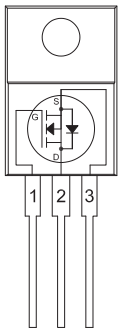
TO-220FP CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.165	0.202	4.20	5.12
B	0.090	0.130	2.30	3.30
C	0.098	0.122	2.50	3.10
D	-	0.031	-	0.80
E	0.382	0.418	9.70	10.63
F	0.238	0.276	6.06	7.00
G	0.583	0.640	14.80	16.25
H	-	0.161	-	4.10
J	0.506	0.543	12.85	13.80
K	0.020	0.031	0.50	0.79
L	0.100		2.54	
M	0.120	0.140	3.05	3.55
N (DIA)	0.116	0.134	2.95	3.40
P	0.039	0.058	1.00	1.47

TO-220FP (REV: R4)

PIN CONFIGURATION



LEAD CODE:
1) Gate
2) Drain
3) Source

MARKING CODE: CDM11-600LR

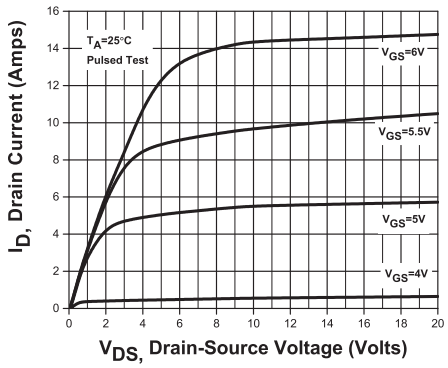
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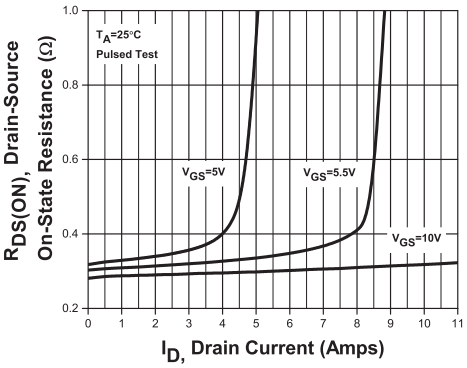
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TYPICAL ELECTRICAL CHARACTERISTICS

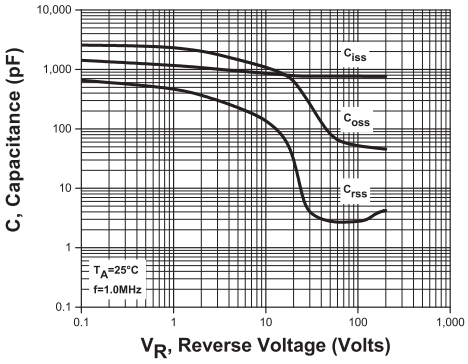
Output Characteristics



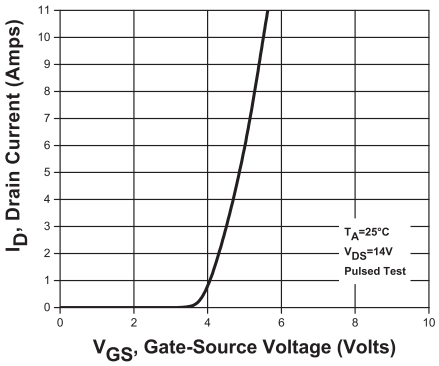
Drain Source On Resistance



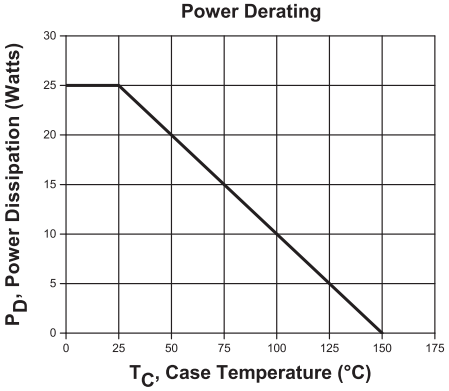
Capacitance



Transfer Characteristics



Power Derating



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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Üretici parça numarasını yazın; stok ve fiyatı hemen görün.

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Entegreden kapasitöre tüm elektronik komponent kategorileri.

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Üreticileri görün

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