



DFN2×2-6L Plastic-Encapsulate MOSFET

CCMP1216 P-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-12V	12mΩ@-4.5V	-16A
	14mΩ@-2.5V	

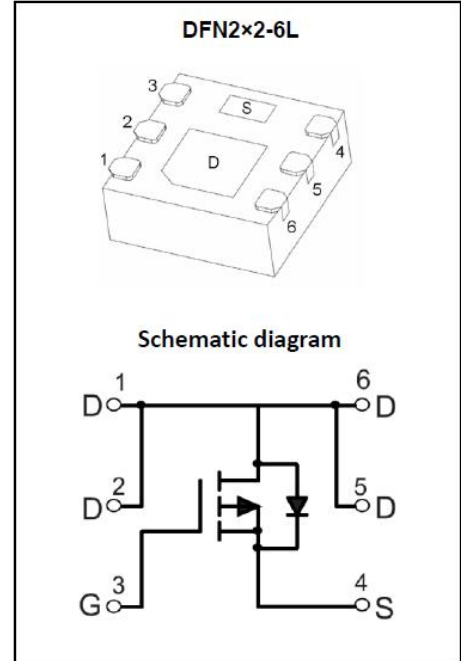
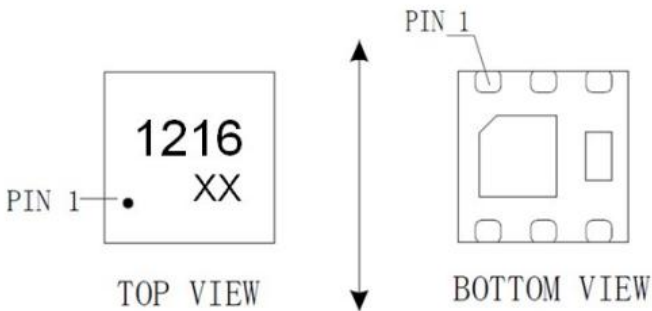
Feature

- Excellent $R_{DS(ON)}$
- Low Gate Charge
- TrenchFET Power MOSFET

Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

MARKING



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-16	A
Pulsed Drain Current ⁽¹⁾	I_{DM}	-65	A
Power Dissipation ⁽²⁾ ($T_a=25^\circ C$)	P_D	2.5	W
Maximum Power Dissipation ⁽³⁾ ($T_c=25^\circ C$)		18	W
Thermal Resistance from Junction to Ambient ⁽⁴⁾	$R_{\theta JA}$	50	$^\circ C/W$
Thermal Resistance from Junction to Case ⁽⁴⁾	$R_{\theta JC}$	6.9	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55~ +150	$^\circ C$

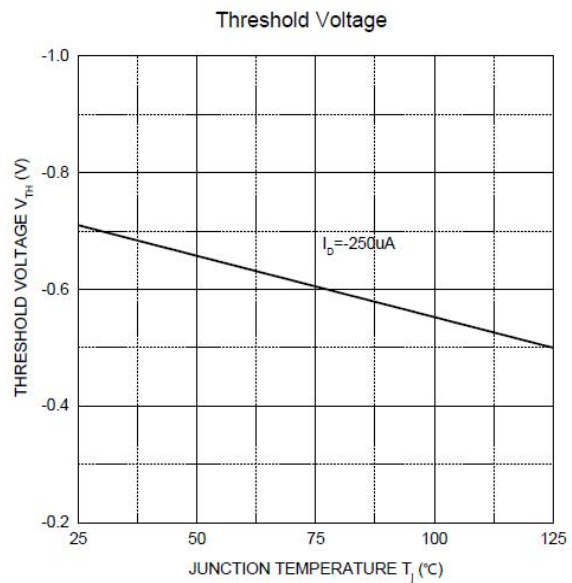
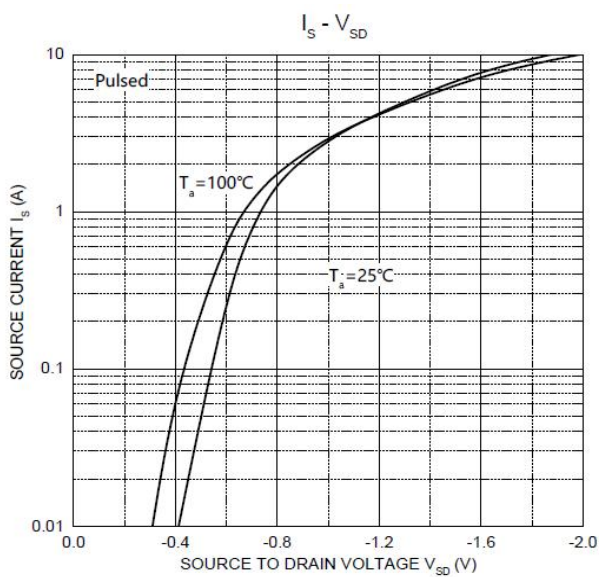
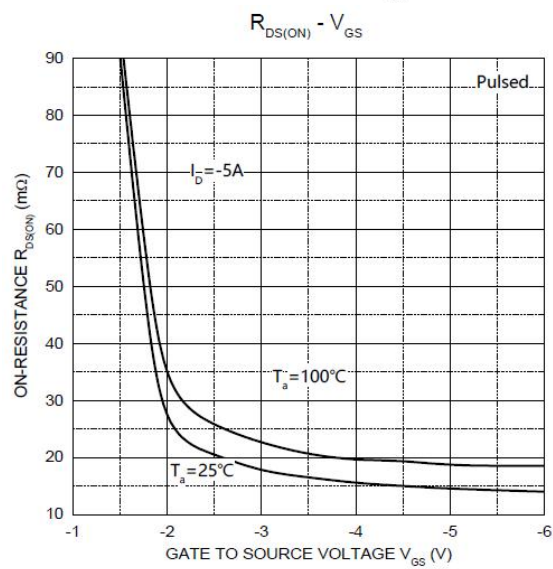
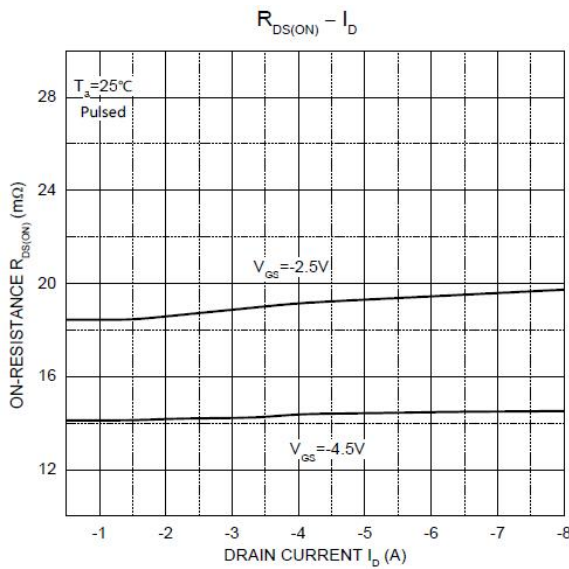
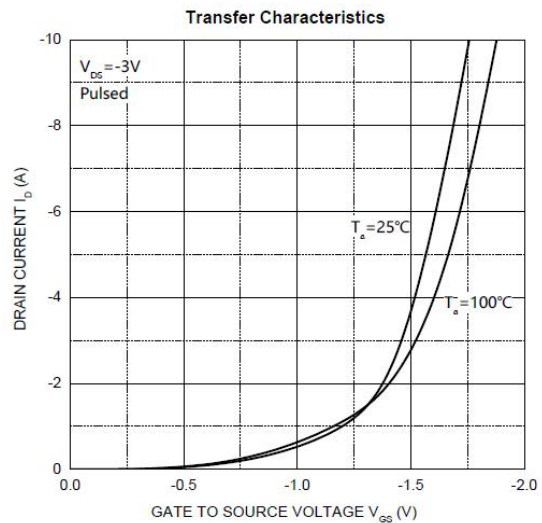
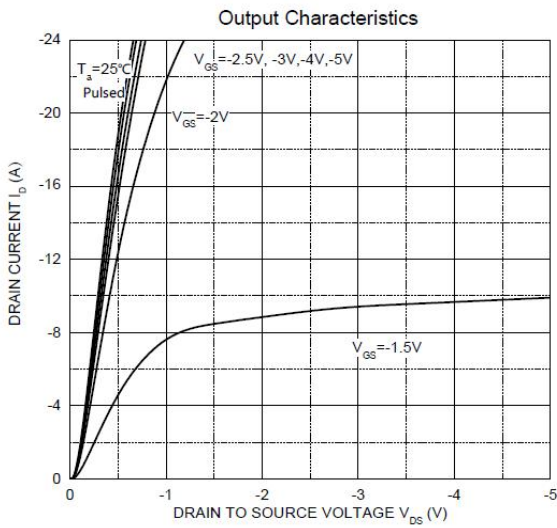
MOSFET ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-12			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = -12V, V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±10V, V _{DS} = 0V			±100	nA
Gate threshold voltage ⁽⁵⁾	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.4	-0.7	-1	V
Drain-source on-resistance ⁽⁵⁾	R _{DS(on)}	V _{GS} = -4.5V, I _D = -6.7A		12	18	mΩ
		V _{GS} = -2.5V, I _D = -4.2A		14	27	
Forward transconductance ⁽⁵⁾	g _{FS}	V _{DS} = -10V, I _D = -6.7A		40		S
Dynamic characteristics⁽⁶⁾						
Input Capacitance	C _{iss}	V _{DS} = -6V, V _{GS} = 0V, f = 1MHz		1658		pF
Output Capacitance	C _{oss}			354		
Reverse Transfer Capacitance	C _{rss}			341		
Gate resistance	R _g	f = 1MHz		45		Ω
Total Gate Charge	Q _g	V _{DS} = -6V, V _{GS} = -4.5V, I _D = -5A		18	23	nC
Gate-Source Charge	Q _{gs}			3		
Gate-Drain Charge	Q _{gd}			4.7		
Turn-on delay time	t _{d(on)}	V _{DD} = -6V, V _{GEN} = -4.5V, I _D = -4A R _L = 6Ω, R _{GEN} = 1Ω		33	40	ns
Turn-on rise time	t _r			31	40	
Turn-off delay time	t _{d(off)}			58	75	
Turn-off fall time	t _f			26	35	
Source-Drain Diode characteristics						
Diode forward current	I _S	T _C = 25°C			-16	A
Diode pulsed forward current ⁽¹⁾	I _{SM}				-48	A
Diode Forward voltage ⁽⁴⁾	V _{DS}	V _{GS} = 0V, I _S = -2A		-0.82	-1.2	V

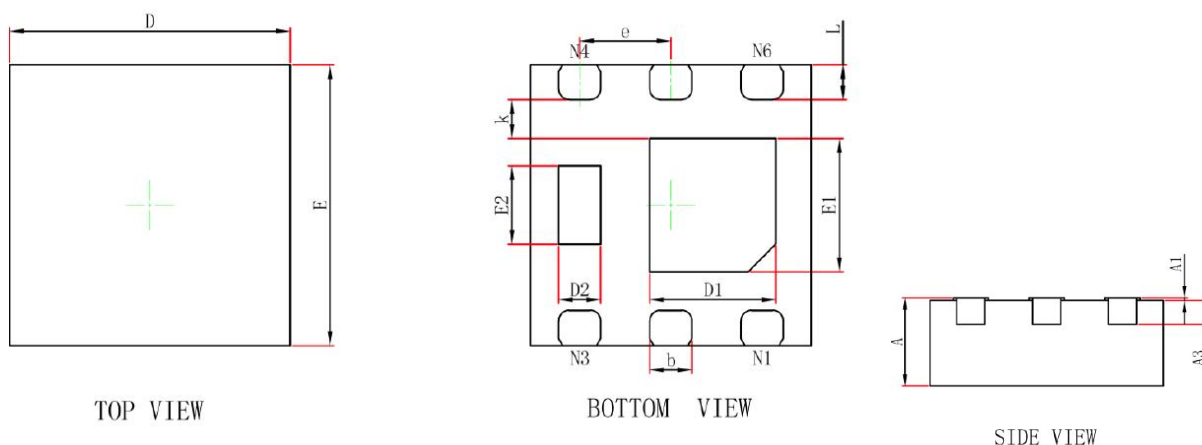
Notes :

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_a = 25°C.
3. This test is performed with infinite heat sink at T_c = 25°C.
4. Surface mounted on FR4 board, t ≤ 10S.
5. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
6. Guaranteed by design, not subject to production testing.

Typical Characteristics



DFN2×2-6L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0	0.050	0	0.002
A3	2.03REF		0.008REF	
D	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.800	1.000	0.031	0.039
E1	0.850	1.050	0.033	0.041
D2	0.200	0.400	0.008	0.016
E2	0.460	0.660	0.018	0.026
k	0.200MIN		0.008MIN	
b	0.250	0.350	0.010	0.014
e	0.65BSC		0.026TYP	
L	0.174	0.326	0.007	0.013

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Date of change	Rev #	revise content
2023/4/27	A/0	/