



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



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MCM1216

P-Channel Power MOSFET

Features

- Advanced trench MOSFET process technology
- Ultra low on-resistance with low gate charge
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:1216

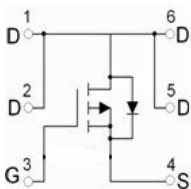
Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Parameter	Rating	Unit
V _{DS}	Drain-source Voltage	-12	V
I _D	Drain Current-Continuous	-16	A
I _{DM}	Pulsed Drain Current (note1)	-65	A
V _{GS}	Gate-source Voltage	± 8	V
P _D	Power Dissipation(note2,Ta=25°C) Maximum Power Dissipation(note3,Tc=25°C)	2.5 18	W
R _{JA}	Thermal Resistance Junction to Ambient(note4)	50	°C/W
R _{JC}	Thermal Resistance Junction to Case(note4)	6.9	°C/W
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

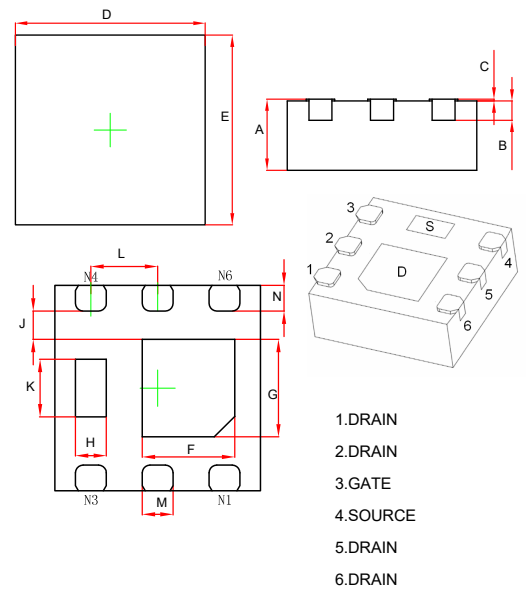
Notes:

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.

Equivalent Circuit



DFN2020-6J



DIM	Dimensions				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.028	.032	0.700	0.800	
B	0.008REF.		0.203REF.		
C	0.000	0.002	0.000	0.050	
D	0.076	0.082	1.924	2.076	
E	0.076	0.082	1.924	2.076	
F	0.031	0.039	0.800	1.000	
G	0.033	0.041	0.850	1.050	
H	0.008	0.016	0.200	0.400	
J	0.008	---	0.200	---	
K	0.018	0.026	0.460	0.660	
L	0.026TYP.		0.650TYP.		
M	0.010	0.014	0.250	0.350	
N	0.007	0.013	0.174	0.326	

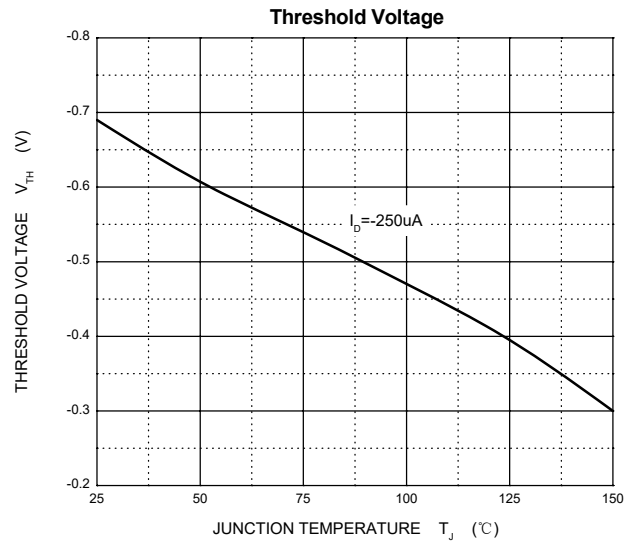
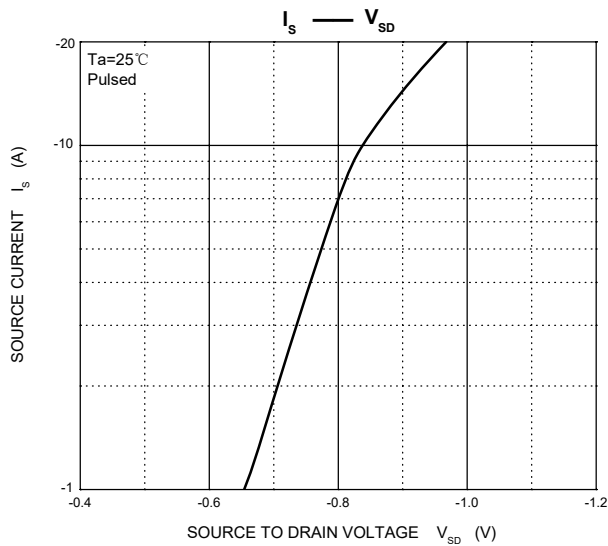
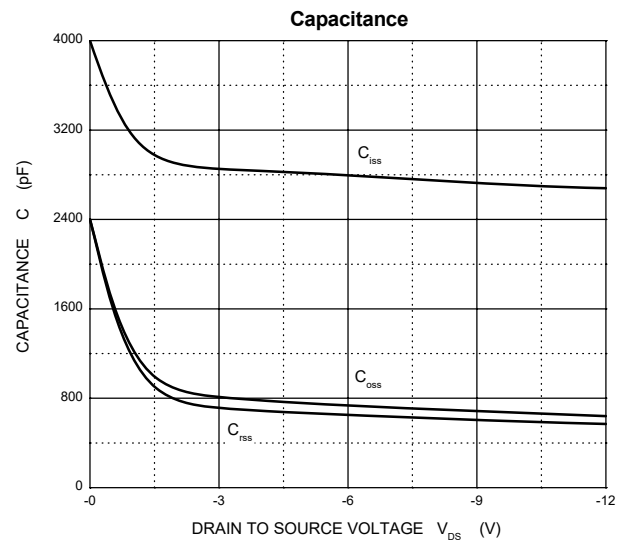
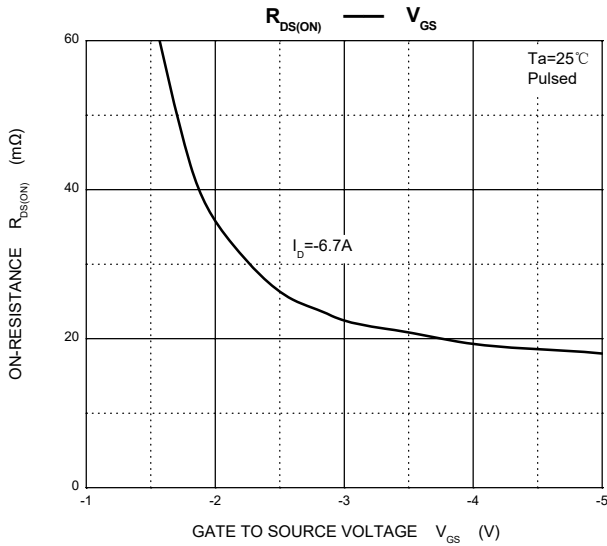
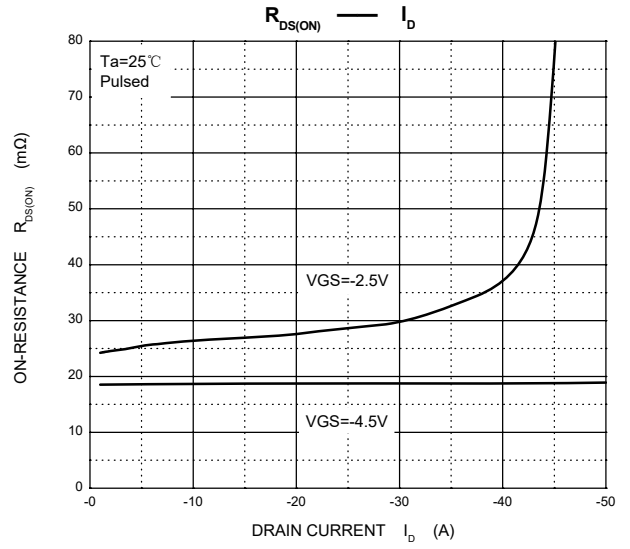
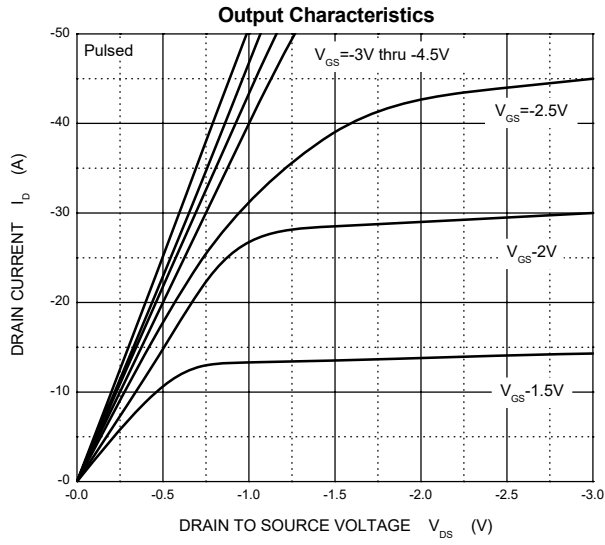
ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-12			V
Gate-Body Leakage Current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±8V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -12V, V _{GS} = 0V			-1	μA
On Characteristics (note 5)						
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-0.4	-0.7	-1	V
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} = -4.5V, I _D = -6.7A			21	mΩ
		V _{GS} = -2.5V, I _D = -6.2A			27	
Forward Transconductance	g _{FS}	V _{DS} = -10V, I _D = -6.7A		40		S
Dynamic Characteristics (note 6)						
Input Capacitance	C _{iSS}	V _{DS} = -10V, V _{GS} = 0V, f = 1MHz		2700		pF
Output Capacitance	C _{oSS}			680		
Reverse Transfer Capacitance	C _{rSS}			590		
Total Gate Charge	Q _g	V _{DS} = -6V, V _{GS} = -8V, I _D = -10A		60	100	nC
				35	48	
Gate-Source Charge	Q _{gs}	V _{DS} = -6V, V _{GS} = -4.5V, I _D = -10A		5		
Gate-Drain Charge	Q _{gd}			10		
Drain-Source Diode Characteristics						
Diode Forward Current (note 5)	I _S				-16	A
Diode Forward Voltage(note 4)	V _{SD}	V _{GS} = 0V, I _{SD} = -8A			-1.2	V

Notes:

5. Pulse Test: Pulse With ≤300μs, Duty Cycle ≤2%.
6. Guaranteed by design, not subject to production testing.

Typical Characteristics





Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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