



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Micro Commercial Components



Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MCCD2005

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:2005

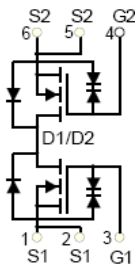
Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Parameter	Rating	Unit
V _{DS}	Drain-source Voltage	20	V
I _D	Drain Current-Continuous	8	A
I _{DM}	Pulsed Drain Current (note1)	30	A
V _{GS}	Gate-source Voltage	± 12	V
R _{θJA}	Thermal Resistance Junction to Ambient	125	°C/W
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Notes:

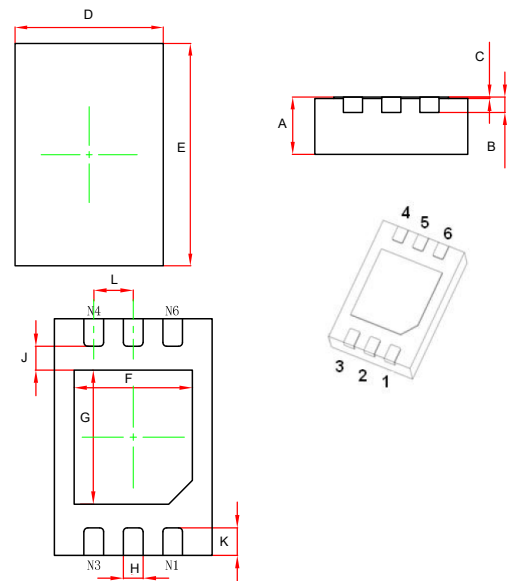
1. Repetitive Rating: Pulse width limited by junction temperature.

Equivalent Circuit



Dual N-Channel Power MOSFET

DFN2030-6



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	0.077	0.081	1.950	2.050	
E	0.116	0.120	2.950	3.050	
F	0.055	0.063	1.400	1.600	
G	0.063	0.071	1.600	1.800	
H	0.008	0.012	0.200	0.300	
J	0.008	---	0.200	---	
K	0.018	0.026	0.300	0.400	
L	0.020TYP.		0.500TYP.		

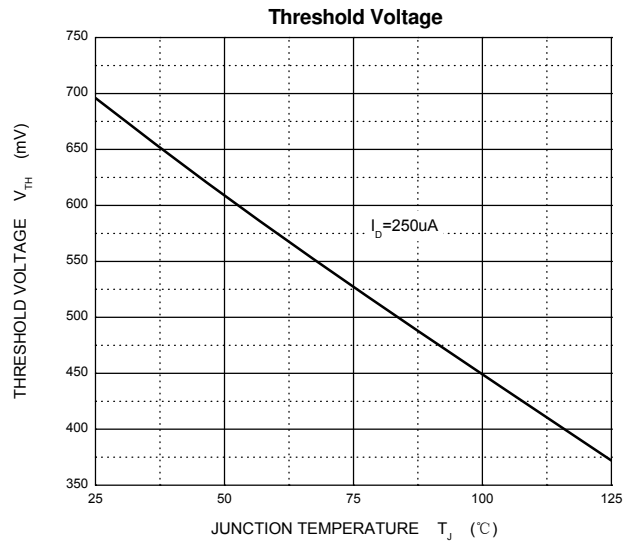
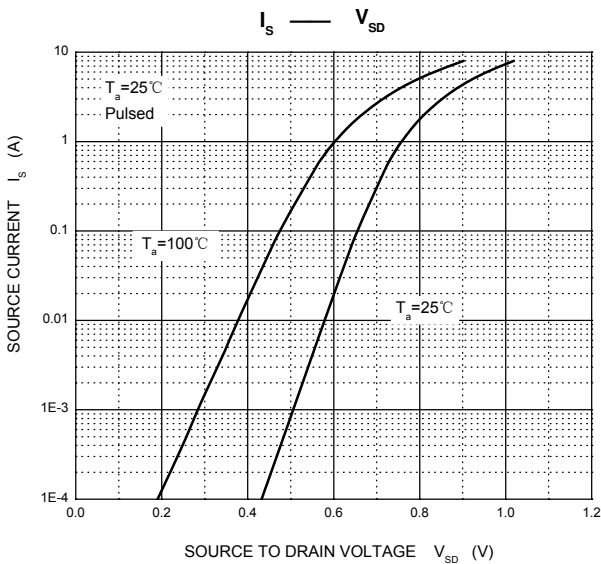
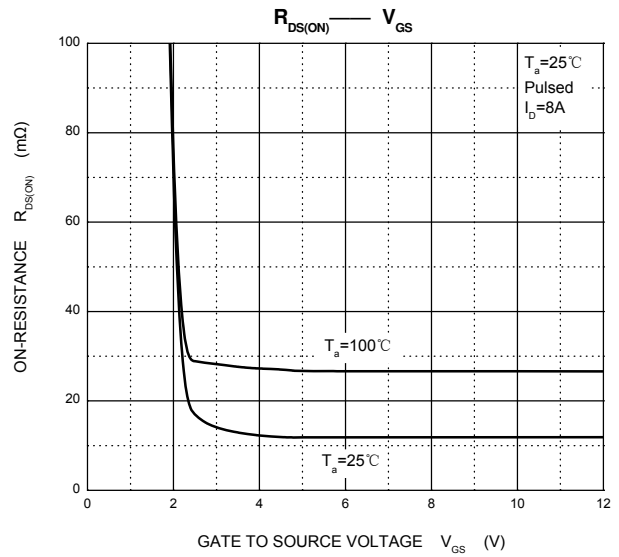
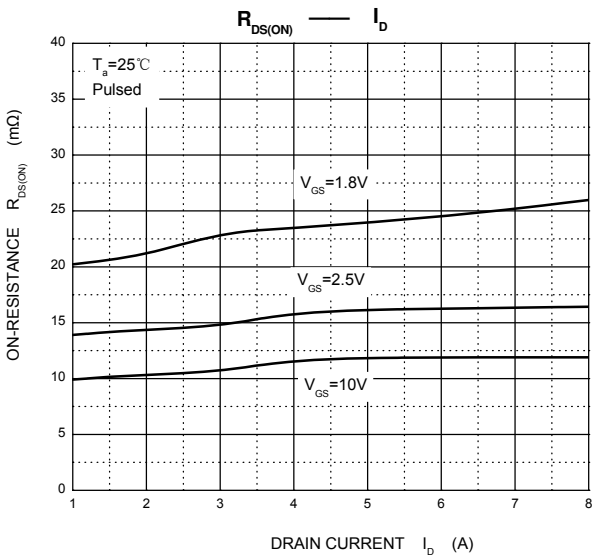
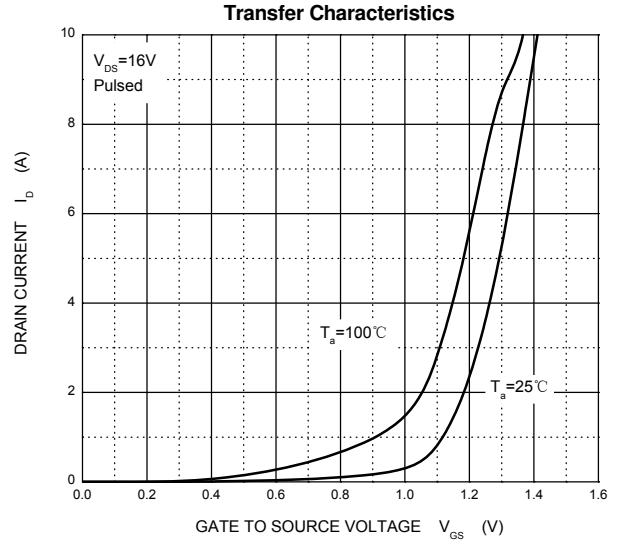
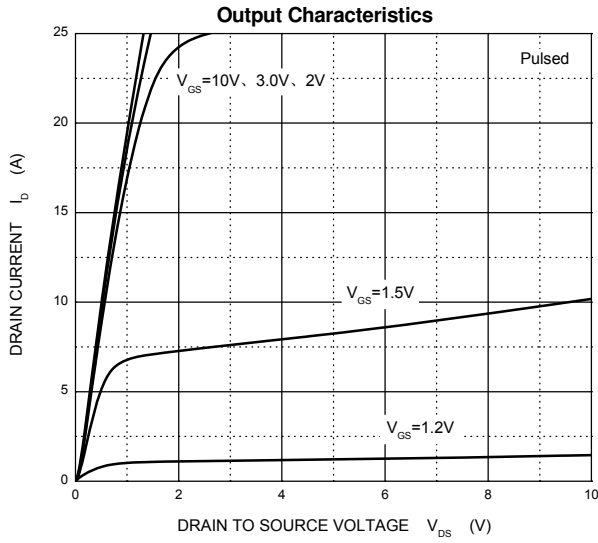
ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =16V, V _{GS} = 0V			10	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±10	μA
Gate threshold voltage (note 1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5		1	V
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =10V, I _D =8A			13	mΩ
		V _{GS} =4.5V, I _D =5A			14	mΩ
		V _{GS} =3.8V, I _D =5A			15.5	mΩ
		V _{GS} =2.5V, I _D =4A			19	mΩ
		V _{GS} =1.8V, I _D =3A			27	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =5V, I _D =8A		36		S
Diode forward voltage(note 1)	V _{SD}	I _S =1A, V _{GS} = 0V			1	V
DYNAMIC PARAMETERS (note 2)						
Input Capacitance	C _{iSS}	V _{DS} =10V, V _{GS} =0V, f =1MHz		1800		pF
Output Capacitance	C _{oSS}			230		pF
Reverse Transfer Capacitance	C _{rSS}			200		pF
Total gate charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =8A		17.9		nC
Gate-source charge	Q _{gs}			1.5		nC
Gate-drain charge	Q _{gd}			4.7		nC
SWITCHING PARAMETERS(note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} =10V, V _{DD} =10V, R _L =1.2Ω, R _{GEN} =3Ω		2.5		ns
Turn-on rise time	t _r			7.2		ns
Turn-off delay time	t _{d(off)}			49		ns
Turn-off fall time	t _f			10.8		ns

Notes :

1. Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
2. 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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