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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

MCQ4822

Features

- Halogen free available upon request by adding suffix "-HF"
- High power and current handing capability
- Lead free product is acquired
- Surface mount package
- Moisture Sensitivity Level 1
- Epoxy meets UL 94 V-0 flammability rating

Mechanical Data

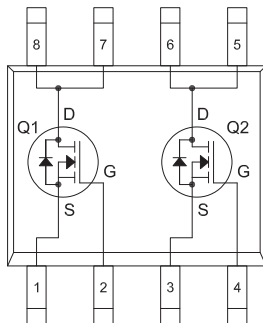
- Case: SOP-8, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Marking: Q4822

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance; 89°C/W Junction To Ambient

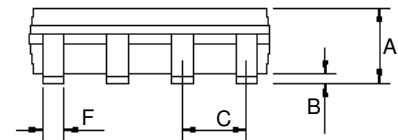
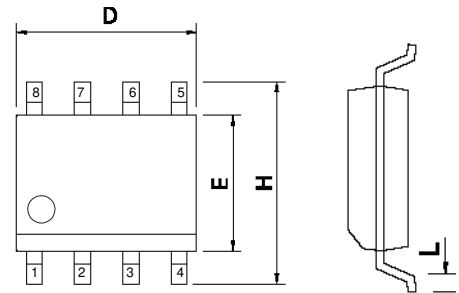
Parameter	Symbol	Value	Unit
Drain-Source-Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current (t ≤ 10s) (note 1)	I_D	8.5	A
Pulsed Drain Current (note 2)	I_{DM}	30	A
Power Dissipation	P_D	1.4	W

Equivalent circuit



N-Channel Enhancement Mode Field Effect Transistor

SOP-8



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.053	.069	1.35	1.75	
B	.004	.010	0.10	0.25	
C	0.050BSC		1.27BSC		
F	.013	.020	0.33	0.51	
D	.189	.197	4.80	5.00	
E	.150	.157	3.80	4.00	
H	.228	.244	5.80	6.20	
L	.016	.050	0.40	1.27	

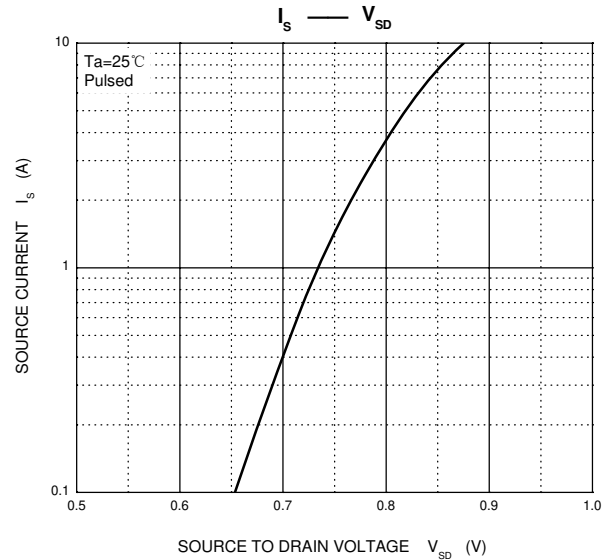
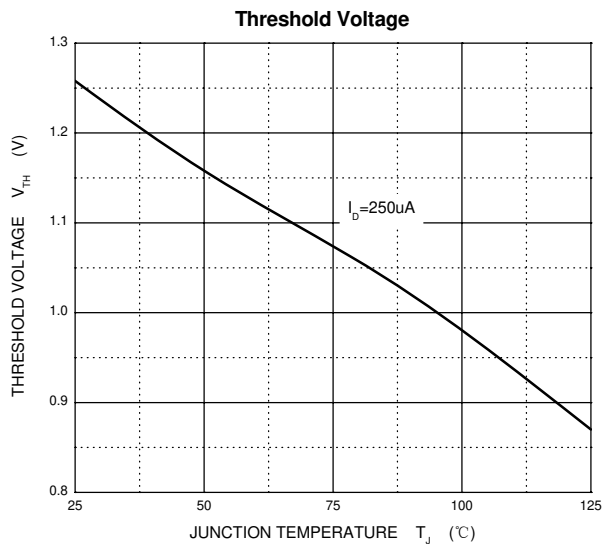
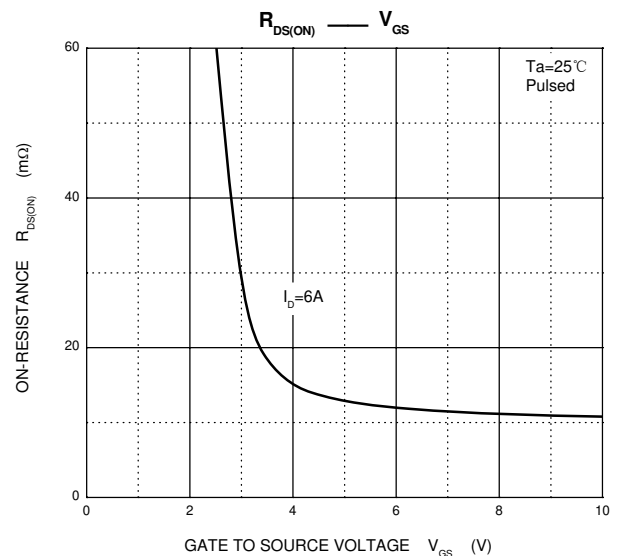
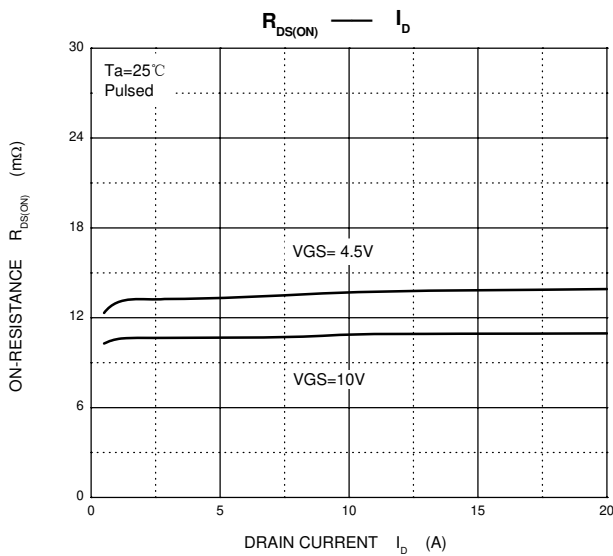
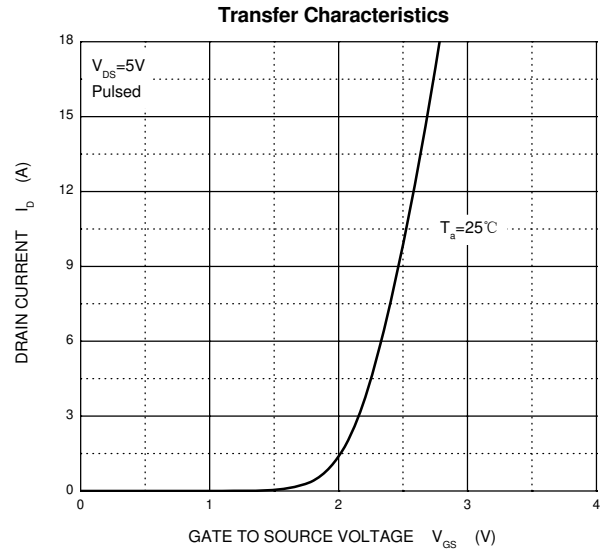
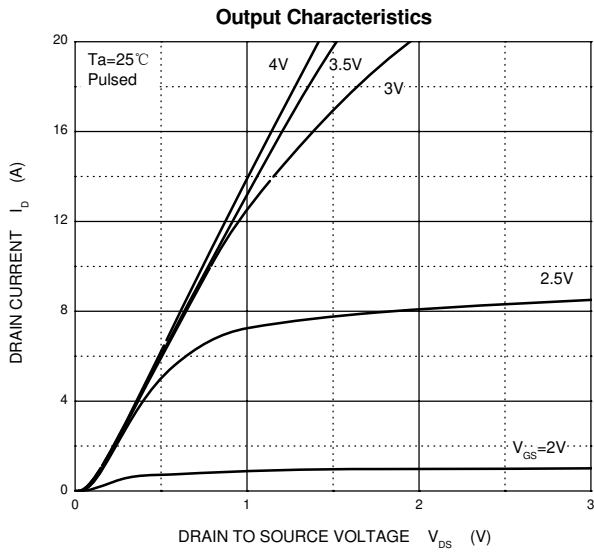
Electrical characteristics (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} = 24V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V			±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1		3	V
Drain-source on-resistance (note 3)	R _{DS(on)}	V _{GS} = 10V, I _D = 8.5A			16	mΩ
		V _{GS} = 4.5V, I _D = 6A			26	mΩ
Forward tranconductance (note 3)	g _{FS}	V _{DS} = 5V, I _D = 8.5A		20		S
Diode forward voltage (note 3)	V _{SD}	I _S = 1A, V _{GS} = 0V			1	V
DYNAMIC PARAMETERS(Note 4)						
Input capacitance	C _{iss}	V _{DS} = 15V, V _{GS} = 0V, f = 1MHz			1250	pF
Output capacitance	C _{oss}			180		pF
Reverse transfer capacitance	C _{rss}			110		pF
SWITCHING PARAMETERS(Note 4)						
Turn-on delay time	t _{d(on)}	V _{GS} = 10V, V _{DS} = 15V, R _L = 1.8Ω, R _{GEN} = 3Ω			7.5	ns
Turn-on rise time	t _r				6.5	ns
Turn-off delay time	t _{d(off)}				25	ns
Turn-off fall time	t _f				5	ns
Total gate charge (10V)	Q _g	V _{DS} = 15V, V _{GS} = 10V, I _D = 8.5A			23	nC
Total gate charge (4.5V)					11.2	nC
Gate-source charge	Q _{gs}			2.6		nC
Gate-drain charge	Q _{gd}			4.2		nC

Notes :

1. The value of R_{θJA} is measure with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with T_a=25°C. The value in any given application depends on the user's specific board design. The current rating is based on the t≤10s thermal resistance rating.
2. Repetitive rating : Pulse width limited by junction temperature.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%.
4. Guaranteed by design, not subject to production testing.

MCQ4822





Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel

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

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