



Micro Commercial Components

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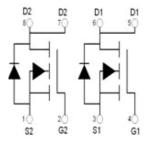
Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant ("P"Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:Q4828

Maximum ratings (T_a=25℃ unless otherwise noted)

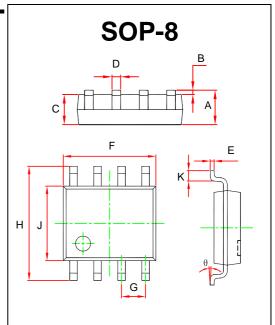
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	60	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current (t ≤10s) (note 1)	I _D	4.5	А
Pulsed Drain Current (note 2)	· I _{DM}	20	А
Repetitive Avalenche Energy 0.1mH (note 2)	E _{AR} ,E _{AS}	18	mJ
Power Dissipation	PD	1.25	W
Thermal Resistance from Junction to Ambient	R _{θJA}	100	°C/W
Operating Junction Temperature	TJ	150	
Storage Temperature	T _{STG}	-55 ~+150 °	

Equivalent Circuit



MCQ4828

Dual N -Channel Mosfet



DIMENSIONS					
DIM	INCHES		MM		
	MIN	MAX	MIN	MAX	NOTE
А	0.053	0.069	1.350	1.750	
В	0.004	0.010	0.100	0.250	
С	0.053	0.061	1.350	1.550	
D	0.013	0.020	0.330	0.510	
Е	0.007	0.010	0.170	0.250	
F	0.189	0.197	4.800	5.000	
G	0.050	(BSC)	1.270	(BSC)	
Н	0.228	0.244	5.800	6.200	
J	0.150	0.157	3.800	4.000	
Κ	0.016	0.050	0.400	1.270	
θ	0°	8°	0°	8°	

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Electrical characteristics (T_a=25 $^{\circ}$ C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Тур	Мах	Unit
STATIC PARAMETERS			•			
Drain-source breakdown voltage	V (BR)DSS	Vgs = 0V, Id =250µA	60			V
Zero gate voltage drain current	loss	V _{DS} =60V,V _{GS} = 0V			1	μA
Gate-body leakage current	lgss	Vgs =±20V, Vds = 0V			±100	nA
Gate threshold voltage (note 3)	VGS(th)	V _{DS} =V _{GS} , I _D =250µA	1	2.1	3	V
Drain-source on-resistance (note 3)	RDS(on)	Vgs =10V, Id =4.5A		40	56	mΩ
		Vgs =4.5V, Id =3A		55	77	mΩ
Forward tranconductance (note 3)	g fs	VDS =5V, ID =4.5A	6			S
Diode forward voltage (note 3)	V _{SD}	I _S =1A, V _{GS} = 0V			1	V
DYNAMIC PARAMETERS (note 4)						
Input Capacitance	C _{iss}				540	pF
Output Capacitance	C _{oss}	VDS =30V,VGS =0V,f =1MHz		60		pF
Reverse Transfer Capacitance	C _{rss}			25		pF
SWITCHING PARAMETERS (note 4	•)					
Turn-on delay time	td(on)			4.7		ns
Turn-on rise time	tr	V _{GS} =10V,V _{DS} =30V,		2.3		ns
Turn-off delay time	td(off)	$R_L=6.7\Omega, R_{GEN}=3\Omega$		15.7		ns
Turn-off fall time	tr			1.9		ns
Total Gate Charge (10V)	0				10.5	nC
Total Gate Charge (4.5V)	Qg				5.5	nC
Gate-Source Charge	Q _{gs}	Q _{gs} V _{DS} =30V,V _{GS} =10V,I _D =4.5A		1.6		nC
Gate-Drain Charge	Q_gd	1		2.2		nC

Notes :

1. The value in any given application depends on the user's specific board design.

2. Repetitive rating : Pulse width limited by junction temperature.

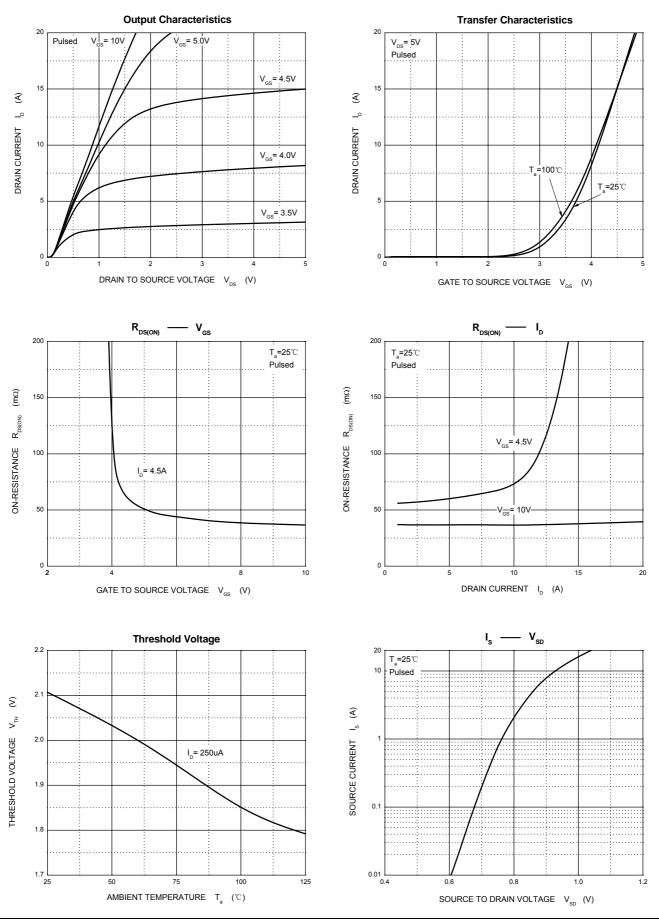
3. Pulse Test : Pulse Width≤300µs, Duty Cycle≤0.5%.

4. These parameters have no way to verify.





Typical Characteristics



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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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