



Micro Commercial Components



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MCQ7328

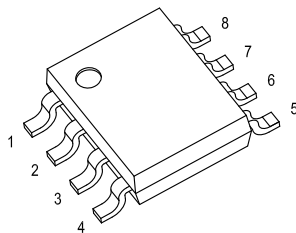
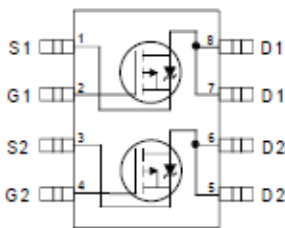
Features

- Ultra low on-Resistance
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:Q7328

Maximum Ratings @ 25°C Unless Otherwise Specified

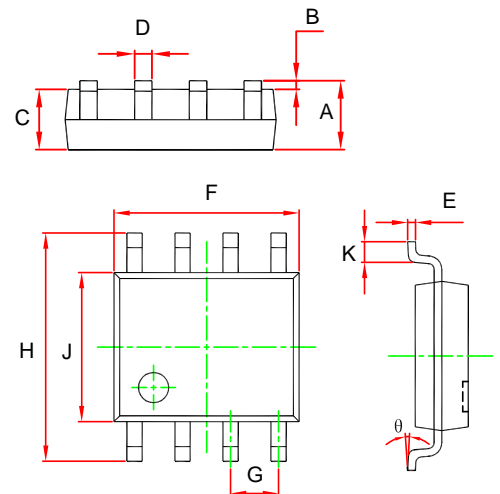
Symbol	Parameter	Rating	Unit
V_{DS}	Drain-source Voltage	-30	V
I_D	Drain Current-Continuous	-8	A
I_{DM}	Pulsed Drain Current (note1)	-32	A
V_{GS}	Gate-source Voltage	± 20	V
P_D	Power Dissipation(note 2)	1.4	W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient(note2)	89	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature	-55 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$

Equivalent Circuit



Dual P-Channel MOSFET

SOP-8



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.053	0.069	1.350	1.750	
B	0.004	0.010	0.100	0.250	
C	0.053	0.061	1.350	1.550	
D	0.013	0.020	0.330	0.510	
E	0.007	0.010	0.170	0.250	
F	0.189	0.197	4.800	5.000	
G	0.050 (BSC)		1.270 (BSC)		
H	0.228	0.244	5.800	6.200	
J	0.150	0.157	3.800	4.000	
K	0.016	0.050	0.400	1.270	
θ	0°	8°	0°	8°	

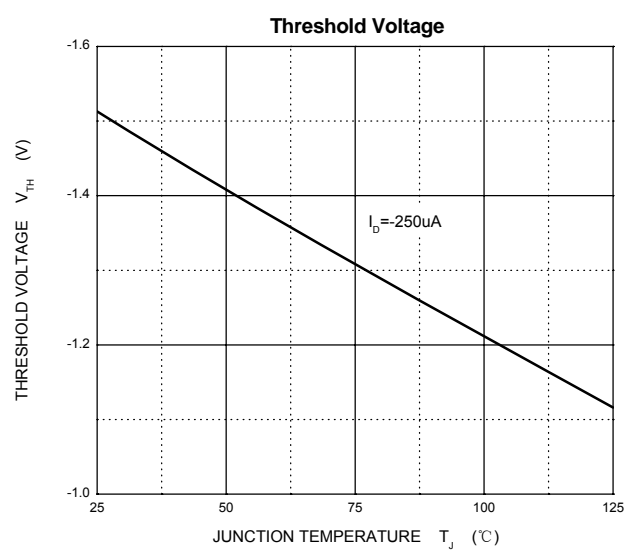
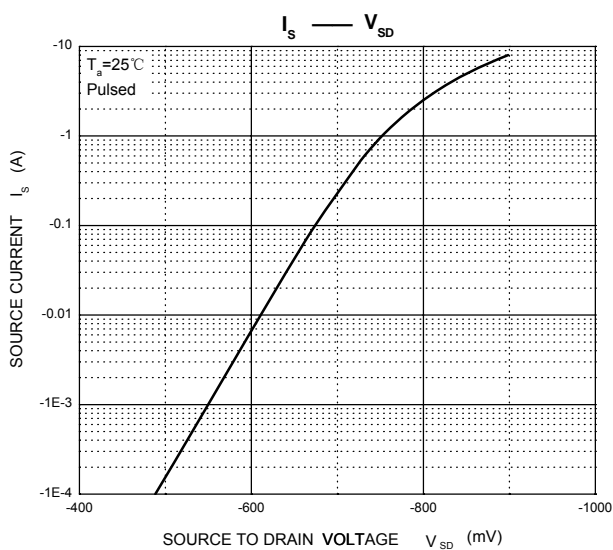
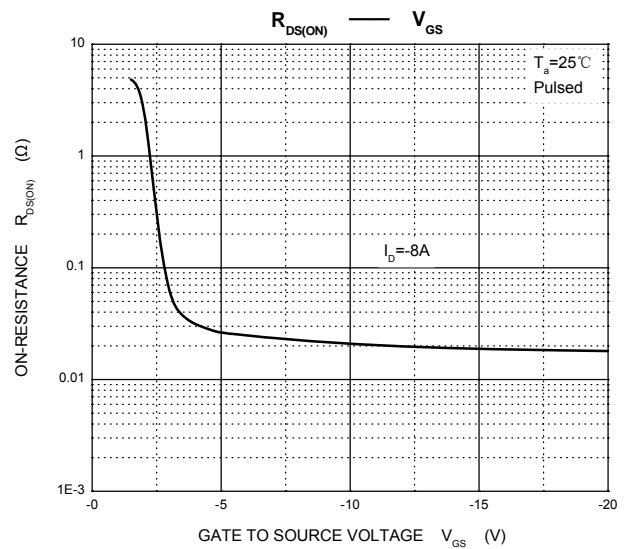
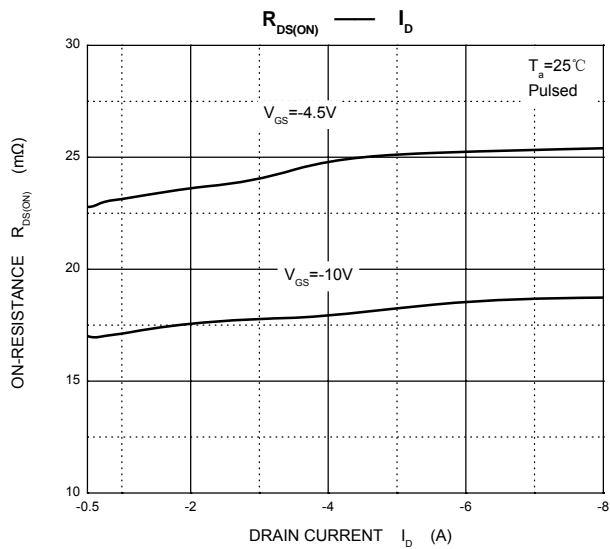
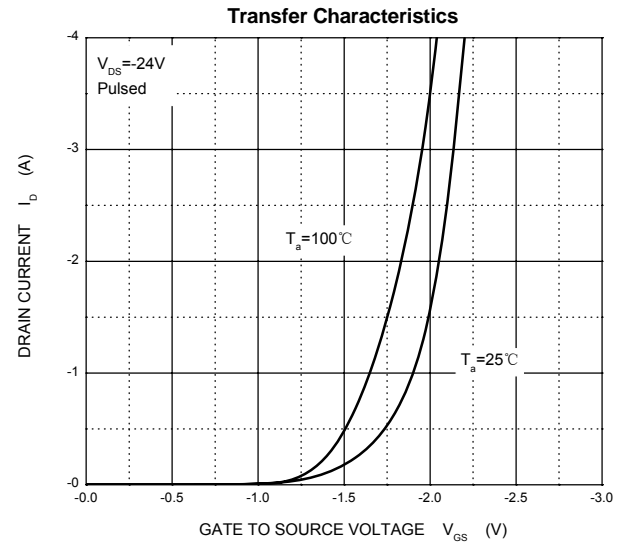
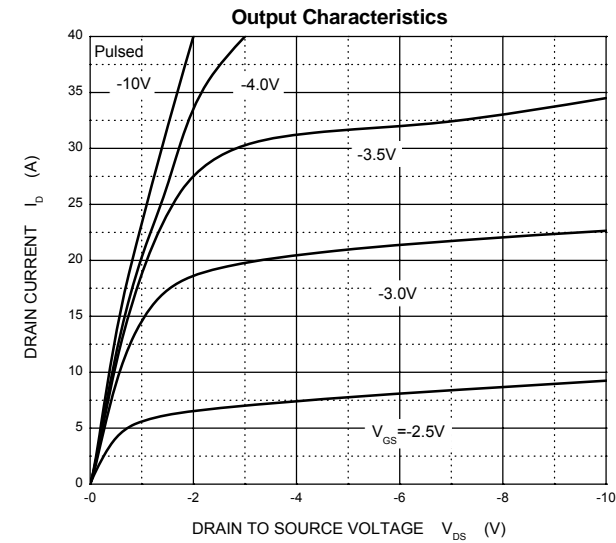
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Characteristics						
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			-15	
Gate body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1.0	-1.5	-2.5	V
Drain-Source on-state Resistance (note 3)	R _{DS(on)}	V _{GS} =-10V, I _D =-8A		19	21	mΩ
		V _{GS} =-4.5V, I _D =-6.8A		26	32	
Forward Transconductance	g _{FS}	V _{DS} =-10V, I _D =-8A	12			S
Dynamic Characteristics (note 4)						
Input Capacitance	C _{iss}	V _{DS} =-25V, V _{GS} =0V, f =1MHz		2675		pF
Output Capacitance	C _{oss}			409		
Reverse Transfer Capacitance	C _{rss}			262		
Total Gate Charge	Q _g	V _{DS} =-15V, V _{GS} =-10V, I _D =-8A			78	nC
Gate-Source Charge	Q _{gs}			9.8		
Gate-Drain Charge	Q _{gd}			8.3		
Turn-On Delay Time	t _{d(on)}	V _{DD} =-15V, R _D =15Ω I _D =-1A, V _{GS} =-10V, R _G =6Ω			20	ns
Rise Time	t _r				23	
Turn-Off Delay Time	t _{d(off)}				297	
Fall Time	t _f				147	
Drain-Source Body Diode Characteristics						
Diode Forward Voltage (note 3)	V _{SD}	I _S =-2A, V _{GS} =0V			-1.2	V

Notes:

1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on 1"×1" FR4 board, $t \leq 10s$.
3. Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production testing.

Typical Characteristics



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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