Features

- Split Gate Trench MOSFET Technology
- Low $R_{DS(on)}$ & FOM
- Low Crss
- Extremely Low Switching Loss
- Excellent Stability and Uniformity
- Moisture Sensitivity Level 1
- Halogen Free. “Green” Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

P-CHANNEL MOSFET

Maximum Ratings

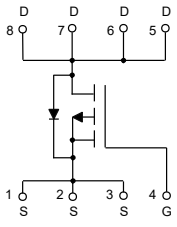
- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 40°C/W Junction to Ambient(t≤10s)
- Thermal Resistance: 75°C/W Junction to Ambient(Steady-State)
- Thermal Resistance: 24°C/W Junction to Lead(Steady-State)

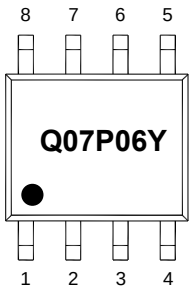
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Volltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-7	A
Pulsed Drain Current(2)	I_{DM}	-30	A
Total Power Dissipation(3)	P_D	3.1	W
Single Pulsed Avalanche Energy(4)	E_{AS}	81	mJ

Note:

1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Repetitive rating; pulse width limited by max. junction temperature.
3. P_D is based on max. junction temperature, using junction-case thermal resistance.
4. V_{DD}=50V, R_G=25Ω, L=0.5mH, I_{AS}=18A.

Internal Structure and Marking Code





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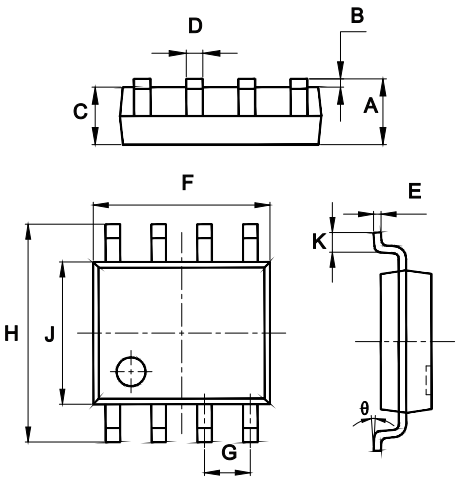
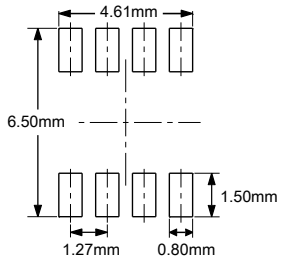


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.053	0.069	1.35	1.75	
B	0.004	0.010	0.10	0.25	
C	0.053	0.061	1.35	1.55	
D	0.013	0.020	0.33	0.51	
E	0.007	0.010	0.17	0.25	
F	0.185	0.200	4.70	5.10	
G	0.050		1.270		TYP.
H	0.228	0.244	5.80	6.20	
J	0.150	0.157	3.80	4.00	
K	0.016	0.050	0.40	1.27	
θ	0°	8°	0°	8°	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=-250μA	-60			V
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V, V_{GS}=0V			-1	μA
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-1.3	-1.8	-2.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-10V, I_D=-6A		35	47	mΩ
		V_{GS}=-4.5V, I_D=-3A		45	60	mΩ
Diode Characteristics						
Continuous Body Diode Current	I_S				-6	A
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=-6A		-0.85	-1.3	V
Reverse Recovery Time	t_{rr}	I_S=-3A,di/dt=100A/μs		20.2		ns
Reverse Recovery Charge	Q_{rr}			8.2		nC
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS}=-30V,V_{GS}=0V,f=1MHz		1100		pF
Output Capacitance	C_{oss}			350		
Reverse Transfer Capacitance	C_{rss}			28		
Total Gate Charge	Q_g	V_{DS}=-30V,V_{GS}=-10V,I_D=-3A		18.7		nC
Gate-Source Charge	Q_{gs}			4.7		
Gate-Drain Charge	Q_{gd}			3.0		
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-30V, V_{GS}=-10V, R_G=6Ω		7.5		ns
Turn-On Rise Time	t_r			39.5		
Turn-Off Delay Time	$t_{d(off)}$			43.6		
Turn-Off Fall Time	t_f			55.1		

Curve Characteristics

Fig. 1 - Typical Output Characteristics

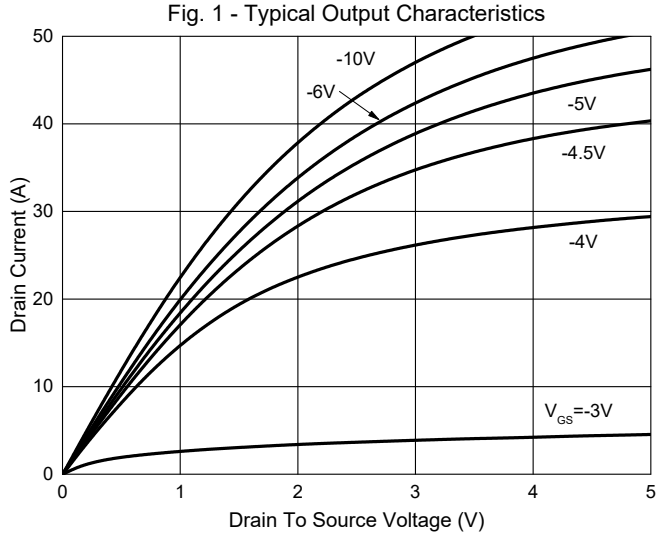


Fig. 2 - Transfer Characteristics

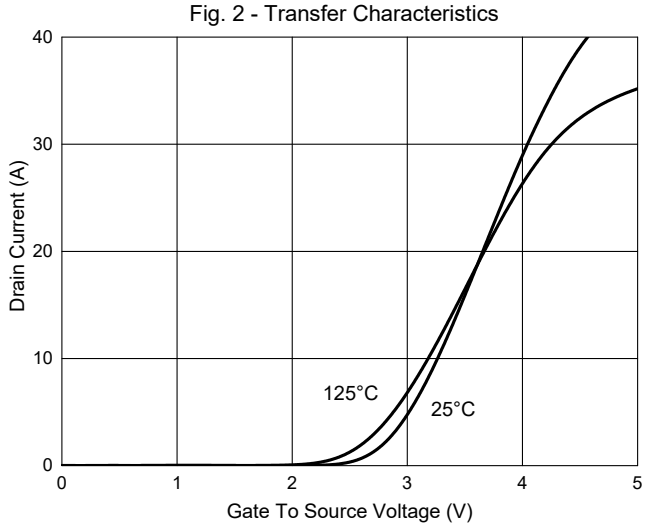


Fig. 3 - $R_{DS(ON)}$—I_D

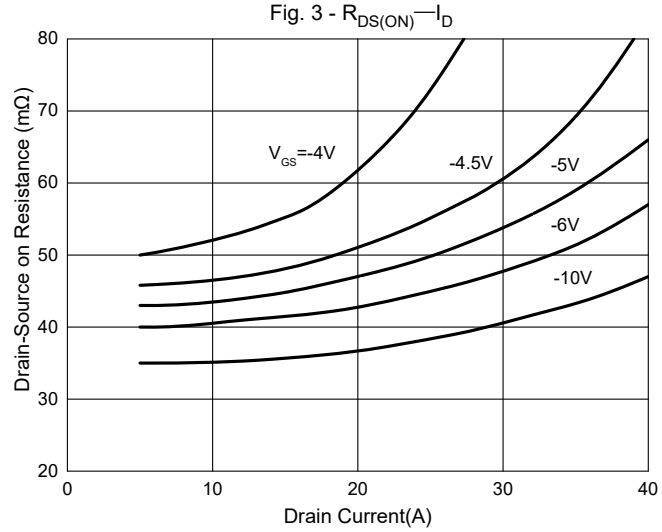


Fig. 4 - Normalized On Resistance Characteristics

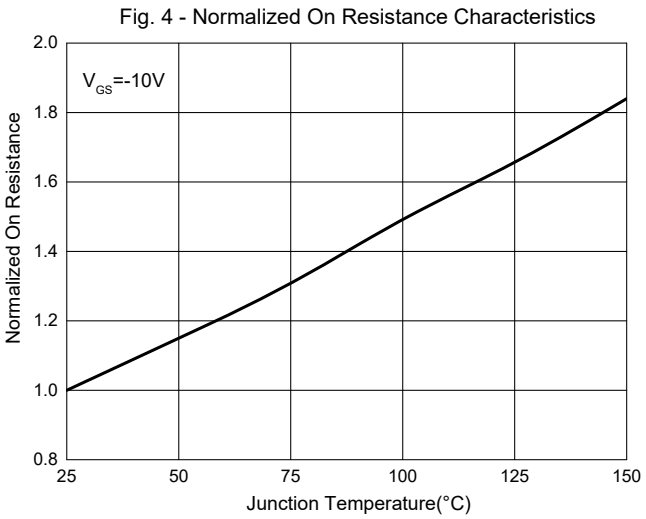


Fig. 5 - Capacitance Characteristics

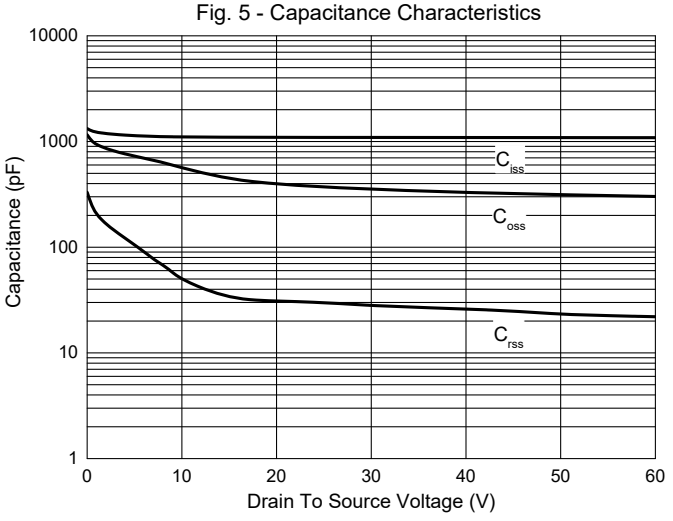
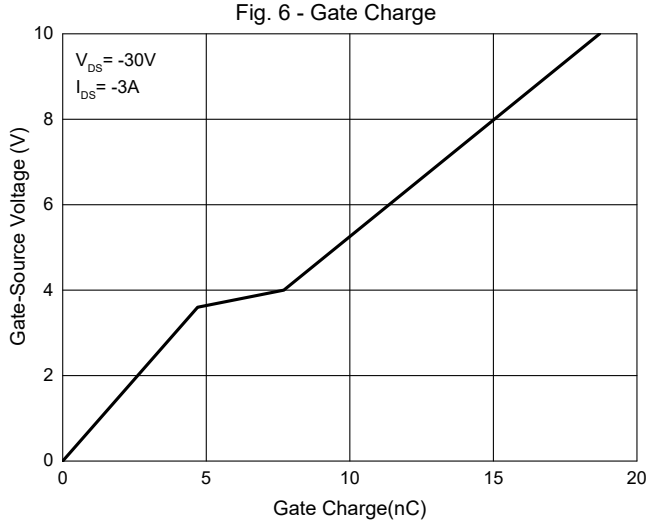


Fig. 6 - Gate Charge



Curve Characteristics

Fig. 7 - Safe Operation Area

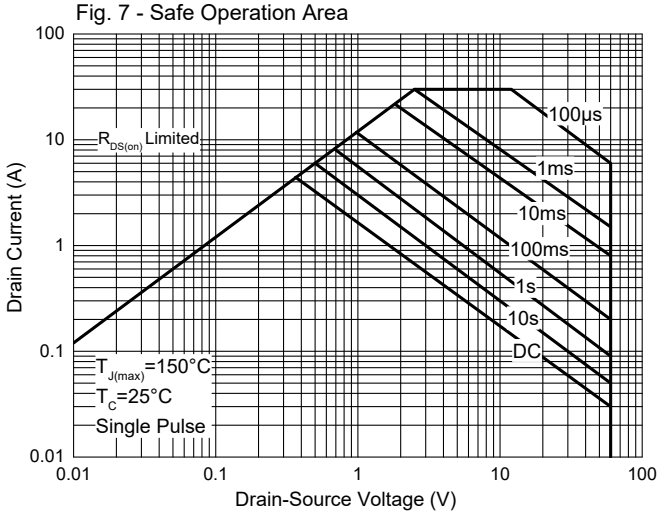
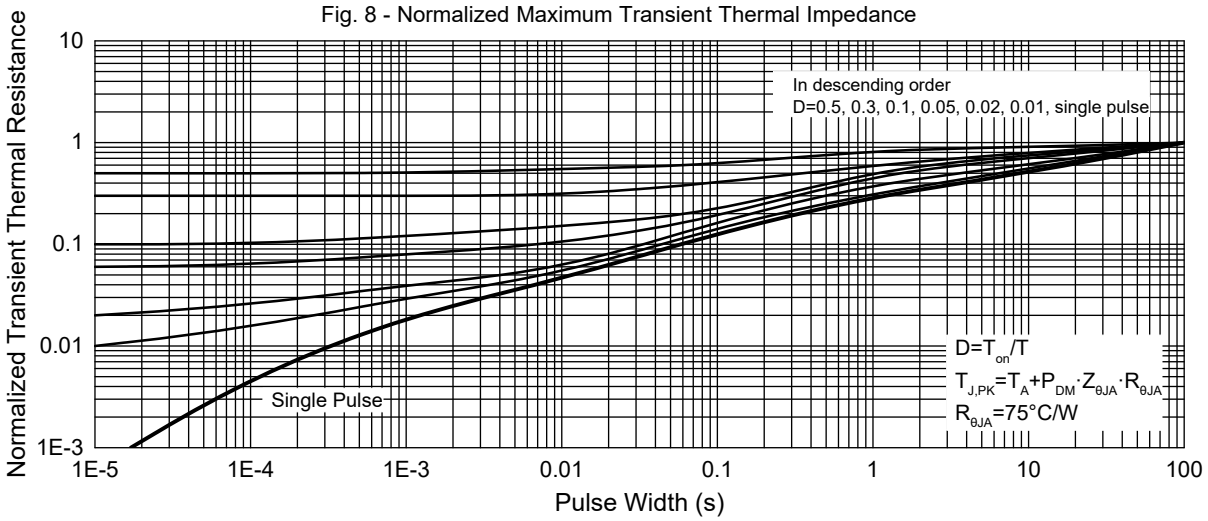


Fig. 8 - Normalized Maximum Transient Thermal Impedance



Ordering Information

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

单击下面可查看定价，库存，交付和生命周期等信息

>>MCC(美微科)