Features

- High Density Cell Design For Low $R_{DS(ON)}$
- Voltage Controlled Small Signal Switch
- High Saturation Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- ESD Protected up to 2KV (HBM)
- Halogen Free. “Green” Device (1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

DUAL N-CHANNEL MOSFET

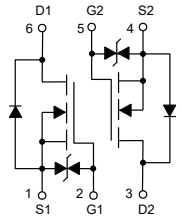
Maximum Ratings

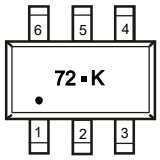
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 416°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current	I_D	340	mA
Total Power Dissipation	P_D	300	mW

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

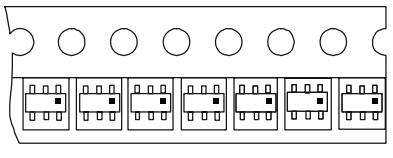
Internal Structure and Marking Code





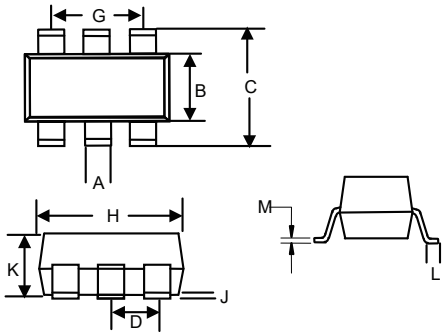
Dot denotes Pin1

Special packing as below



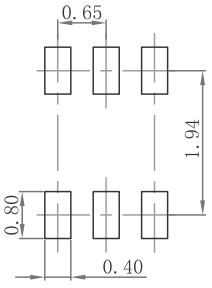
Feed Direction

SOT-363



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

SUGGESTED SOLDER PAD LAYOUT



ELECTRICAL CHARACTERISTICS (Ta=25℃ 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-Threshold Voltage(2)	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=1mA	1.0		2.5	V
Gate-Body Leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=48V, V_{GS}=0V			1	μA
Drain-Source On-Resistance(2)	$R_{DS(on)}$	V_{GS}=10V, I_D=500mA			3.0	Ω
		V_{GS}=4.5V, I_D=200mA			4.0	
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=300mA			1.3	V
Recovered Charge	Q_r	V_{GS}=0V, I_S=300mA,V_R=25V, dIs/dt=-100A/μs		30		nC
Dynami Characteristics(3)						
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V, f=1MHz			40	pF
Output Capacitance	C_{oss}				30	
Reverse Transfer Capacitance	C_{rss}				10	
Switching Characteristics(3)						
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=50V,V_{GS}=10V,R_L=250Ω, R_{GS}=50Ω,R_{GEN}=50Ω			20	ns
Turn-Off Delay Time	$t_{d(off)}$				40	
Reverse Recovery Time	t_{rr}	V_{GS}=0V,I_S=300mA, V_R=25V, dIs/dt=-100A/μs		30		
Gate-Source Zener Diode						
Gate-Source Breakdown Voltage	BV_{GSO}	I_{gs}=±1mA(Oper Drain)	±21.5		±30	V

Note: 2. Pulse Test: Pulse Width ≤300μs, Duty Cycle≤2%.
3. These Parameters Have No Way to Verify.

Curve Characteristics

Fig. 1 - Output Characteristics

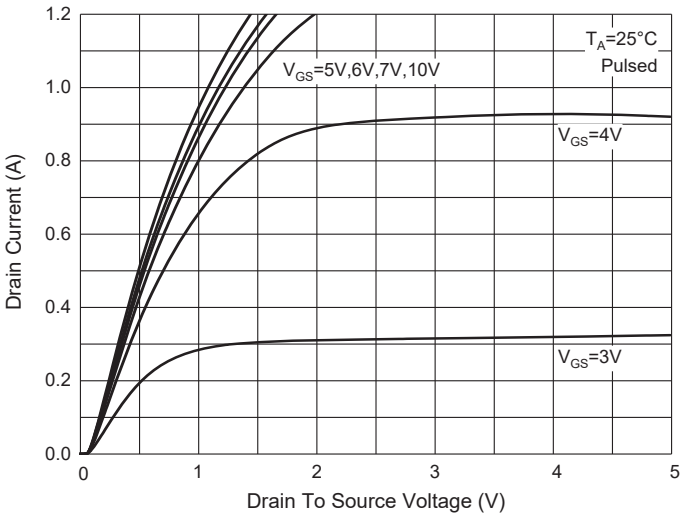


Fig. 2 - Transfer Characteristics

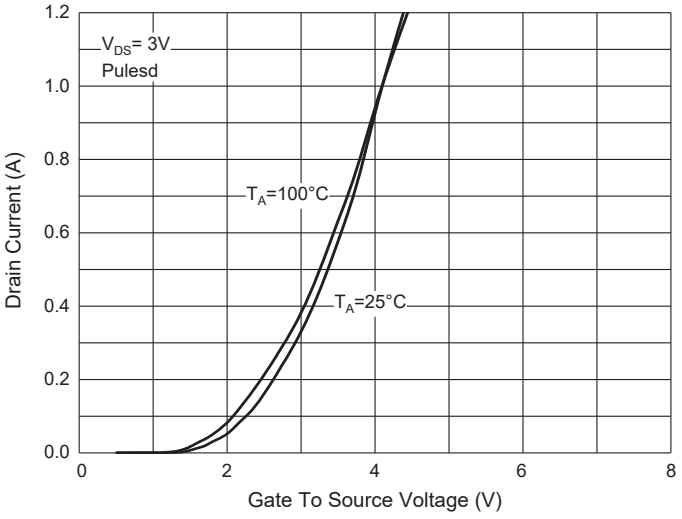


Fig. 3 - $R_{DS(ON)}$—I_D

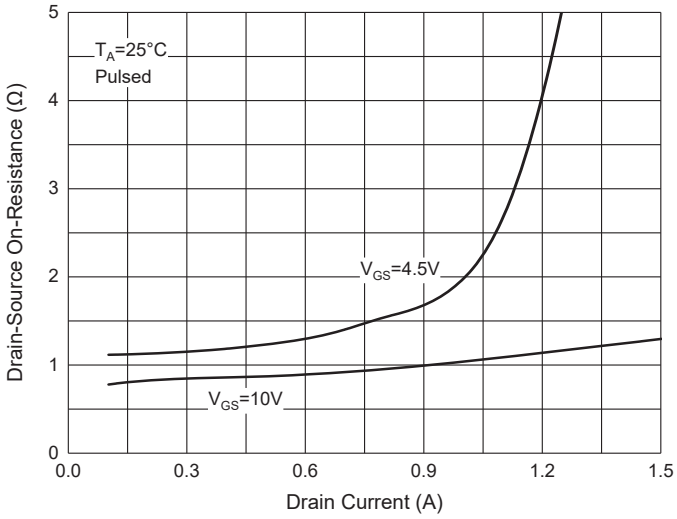


Fig. 4 - $R_{DS(ON)}$—V_{GS}

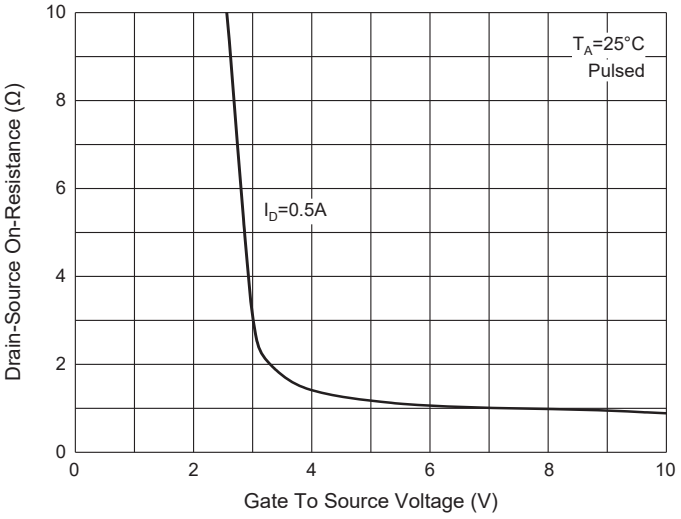


Fig. 5 - I_S—V_{SD}

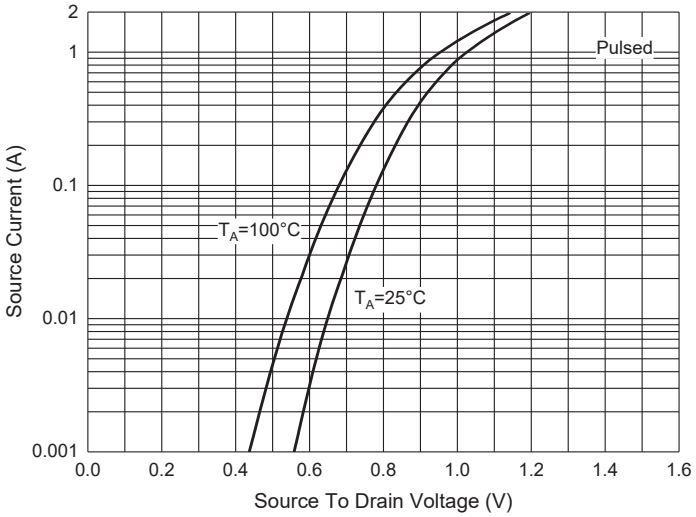
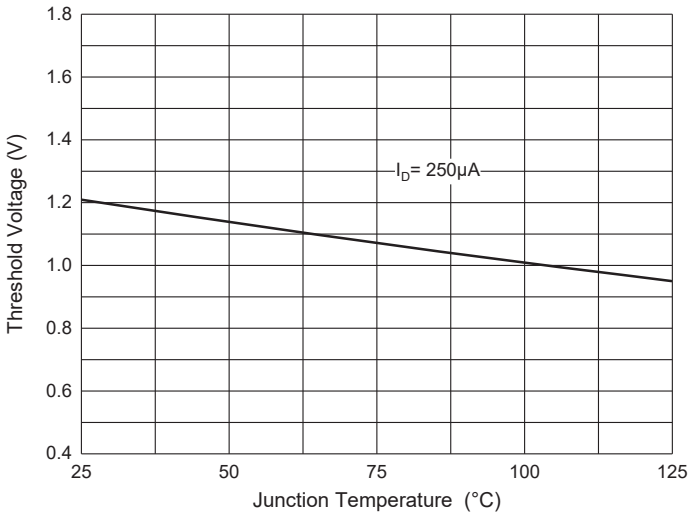


Fig. 6 - Threshold Voltage



Ordering Information

Device	Packing
Part Number-TPQ2	Tape&Reel:3Kpcs/Reel

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