

Features

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

Maximum Ratings

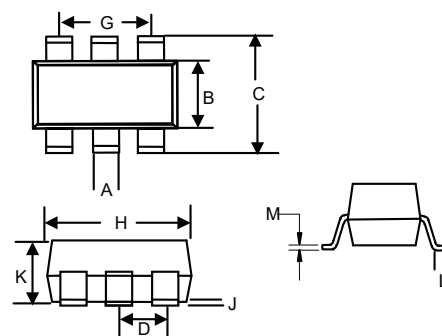
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 415°C/W Junction to Ambient

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

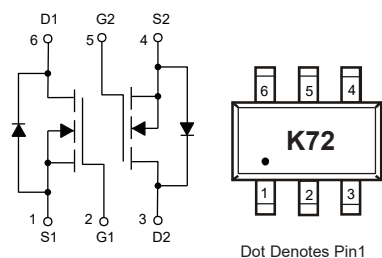
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

DUAL N-CANNEL MOSFET

SOT-363

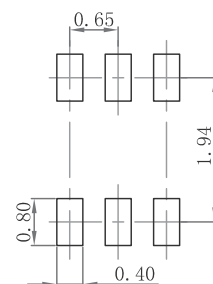


Internal Structure and Marking Code

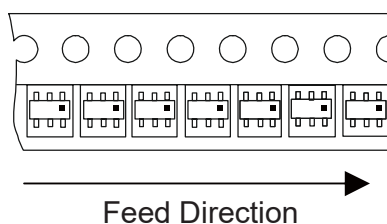


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

SUGGESTED SOLDER PAD LAYOUT



Special packing as below



ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	60			V
Gate-Threshold Voltage ⁽²⁾	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.0		2.5	V
Gate-Body Leakage	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			80	
Drain-Source On-Resistance ⁽²⁾	$R_{DS(on)}$	$V_{GS}=10V, I_D=300mA$		1.1	2.5	Ω
		$V_{GS}=4.5V, I_D=200mA$		1.3	3	
Drain-Source On-Voltage ⁽²⁾	$V_{DS(on)}$	$V_{GS}=10V, I_D=500mA$			3.75	V
		$V_{GS}=5V, I_D=50mA$			0.375	
Forward Transconductance ⁽²⁾	g_{fs}	$V_{DS}=10V, I_D=200mA$	80			ms
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=115mA$	0.55		1.2	V
Input Capacitance ⁽³⁾	C_{iss}	$V_{DS}=25V, V_{GS}=0V, f=1MHz$			50	pF
Output Capacitance ⁽³⁾	C_{oss}				25	
Reverse Transfer Capacitance ⁽³⁾	C_{rss}				5	
Turn-On Time ⁽³⁾	$t_{d(on)}$	$V_{DD}=25V, V_{GEN}=10V, R_L=50\Omega, I_D=500mA, R_{GEN}=25\Omega$			20	ns
Turn-Off Time ⁽³⁾	$t_{d(off)}$				40	

 Note: 2. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

3. These Parameters Have No Way to Verify.

Curve Characteristics

Fig. 1 - Output Characteristics

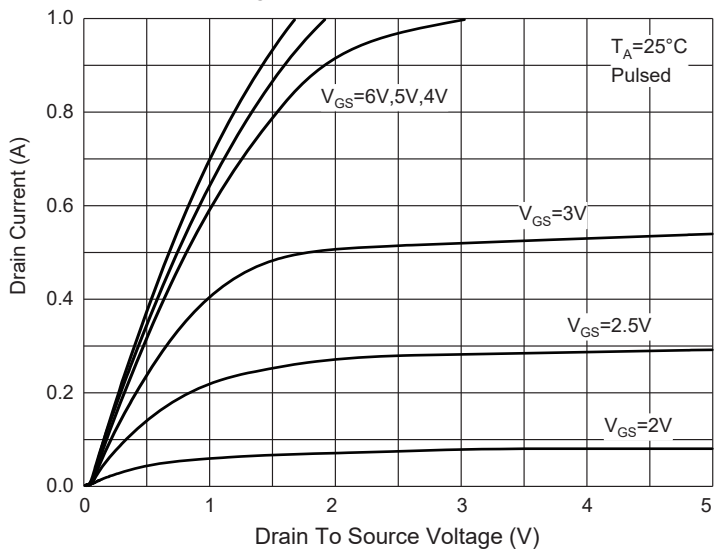


Fig. 2 - Transfer Characteristics

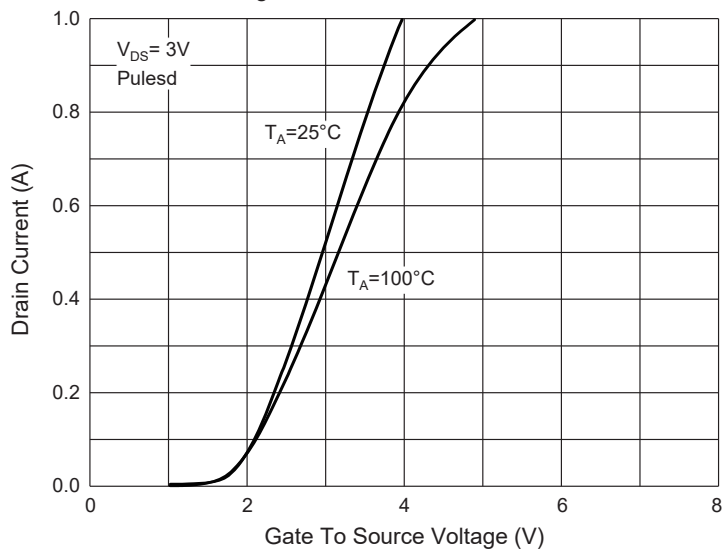


Fig. 3 - $R_{DS(ON)} - I_D$

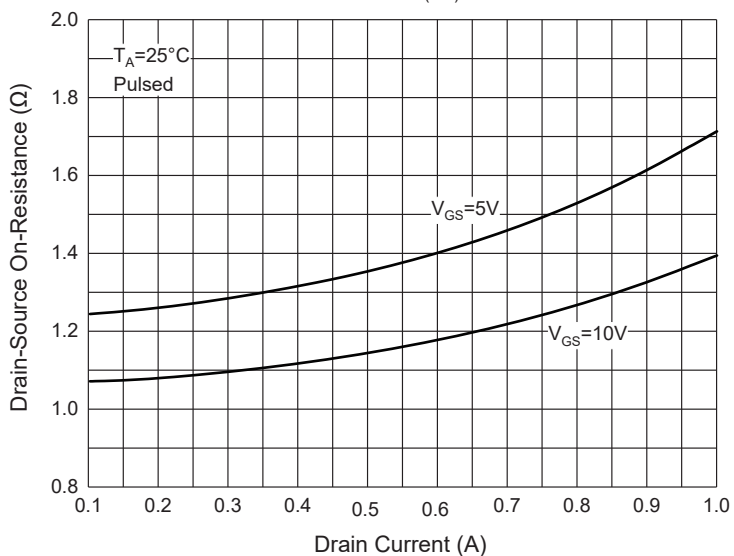


Fig. 4 - $R_{DS(ON)} - V_{GS}$

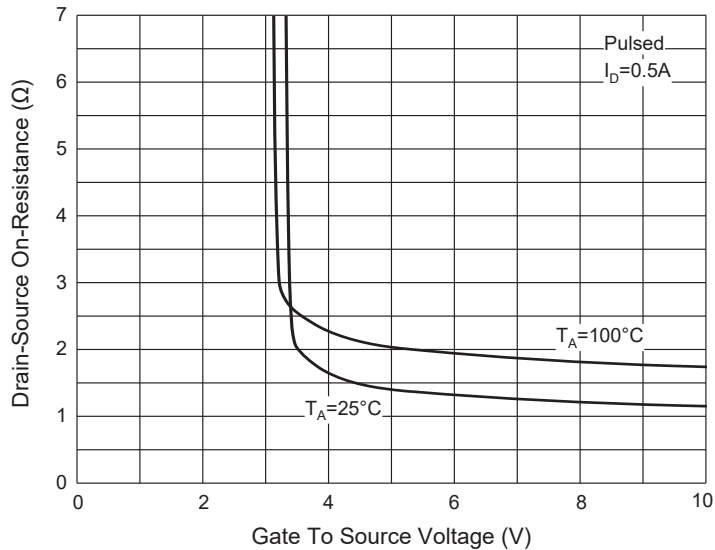


Fig. 5 - $I_S - V_{SD}$

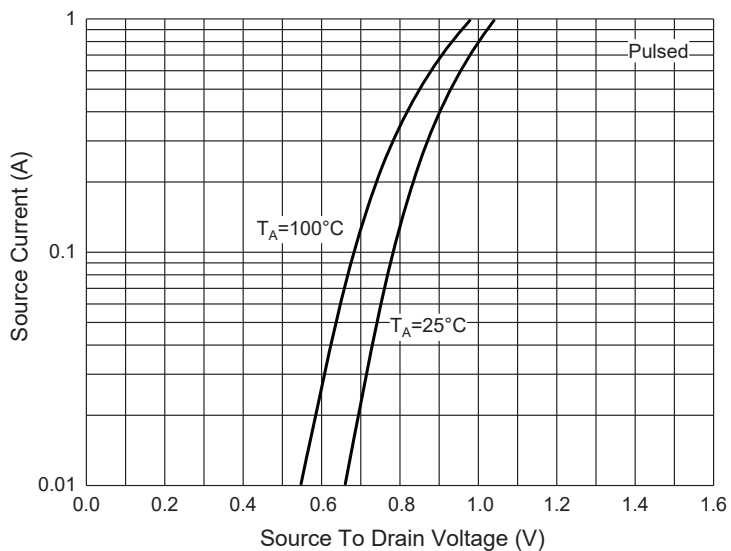
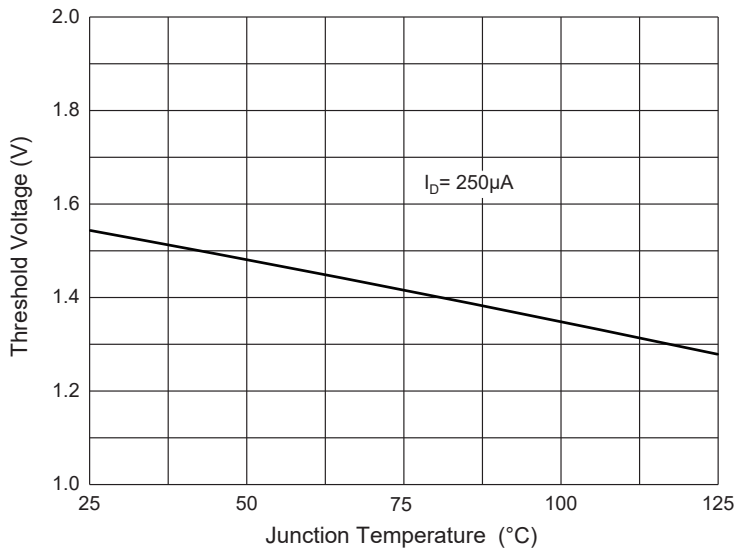
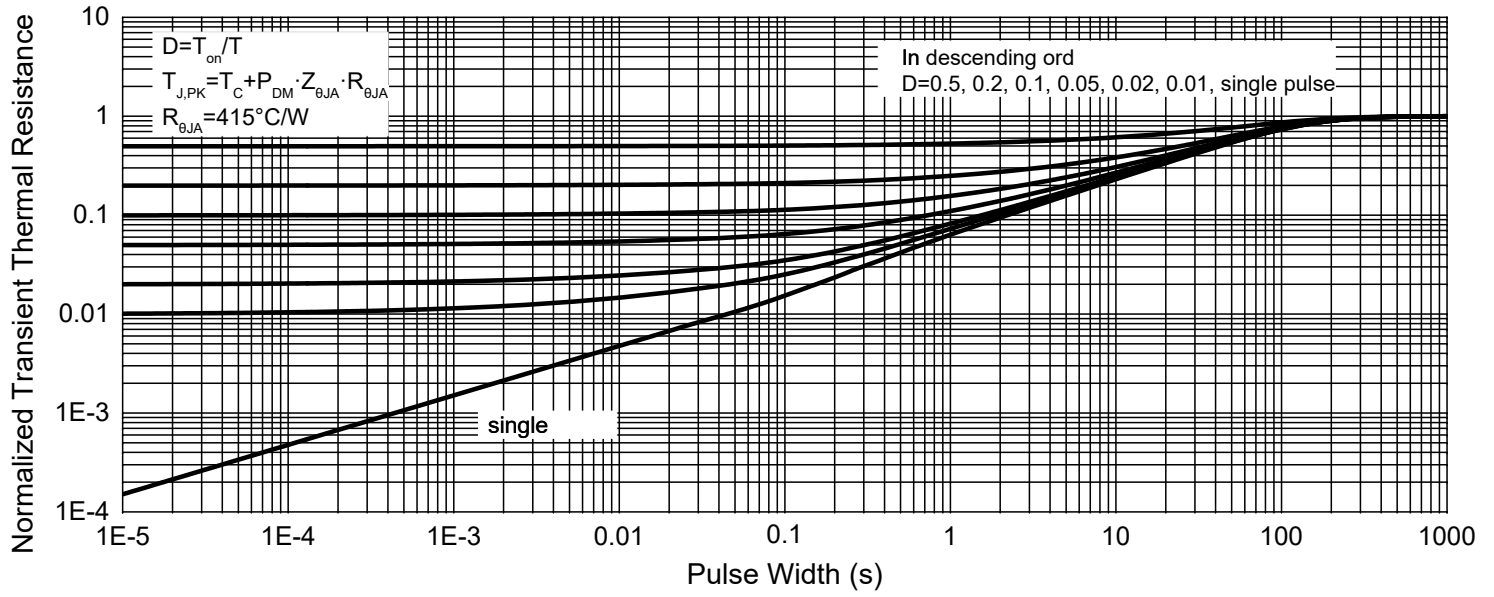


Fig. 6 - Threshold Voltage



Curve Characteristics

Fig. 7 - Normalized Transient Thermal Impedance



Ordering Information

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

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