

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)
- ESD Protected up to 2KV (HBM)

Maximum Ratings

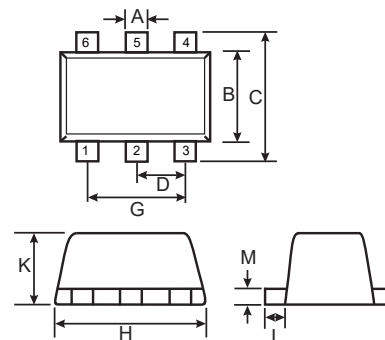
- Operating Junction Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature: -55°C to $+150^{\circ}\text{C}$
- Thermal Resistance: 833°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	I_D	0.34	A
Power Dissipation	P_D	0.15	W

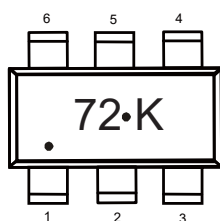
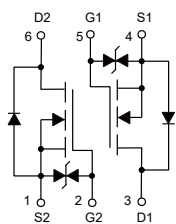
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

DUAL N-CANNEL MOSFET

SOT-563



Internal Structure and Marking Code



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.011	0.15	0.30	
B	0.043	0.051	1.10	1.30	
C	0.059	0.067	1.50	1.70	
D	0.020		0.50		TYP.
G	0.035	0.043	0.90	1.10	
H	0.059	0.067	1.50	1.70	
K	0.022	0.026	0.55	0.65	
L	0.004	0.011	0.10	0.30	
M	0.004	0.007	0.10	0.18	

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	60			V
Gate-Threshold Voltage ⁽²⁾	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=1mA$	1.0		2.5	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=48V, V_{GS}=0V$			1.0	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 10	μA
Drain-Source On-Resistance ⁽²⁾	$R_{DS(on)}$	$V_{GS}=10V, I_D=500mA$			5.0	Ω
		$V_{GS}=4.5V, I_D=200mA$			5.3	
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=200mA$			1.5	V
Dynamic Characteristics						
Input Capacitance ⁽³⁾	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$			40	pF
Output Capacitance ⁽³⁾	C_{oss}				30	
Reverse Transfer Capacitance ⁽³⁾	C_{rss}				10	
Switching Characteristics						
Turn-On Delay Time ⁽³⁾	$t_{d(on)}$	$V_{GS}=10V, I_S=200mA, V_{DD}=50V, di/dt=100A/\mu s, R_{GEN}=50\Omega$		7		ns
Turn-Off Delay Time ⁽³⁾	$t_{d(off)}$			20		
Turn-On Rise Time ⁽³⁾	t_r			19		
Turn-Off fall Time ⁽³⁾	t_f			84		
Reverse Recovery Time	t_{rr}	$V_{GS}=0V, I_S=300mA, V_R=25V, di/dt=100A/\mu s$		16		nC
Reverse Recovery Charge	Q_{rr}			3.6		

 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

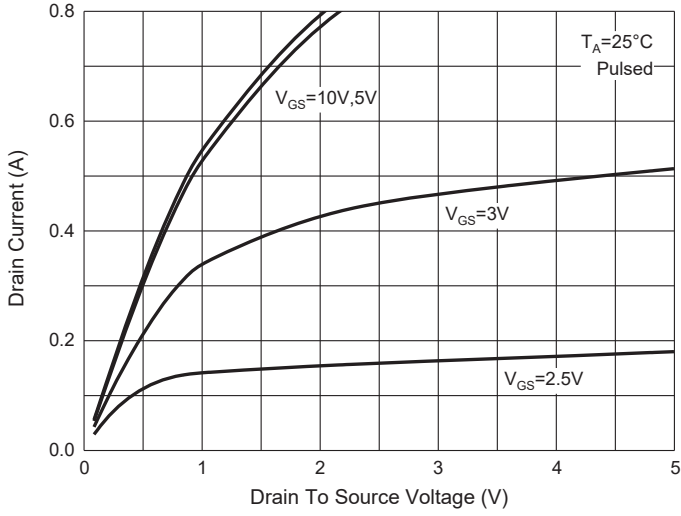


Fig. 2 - Transfer Characteristics

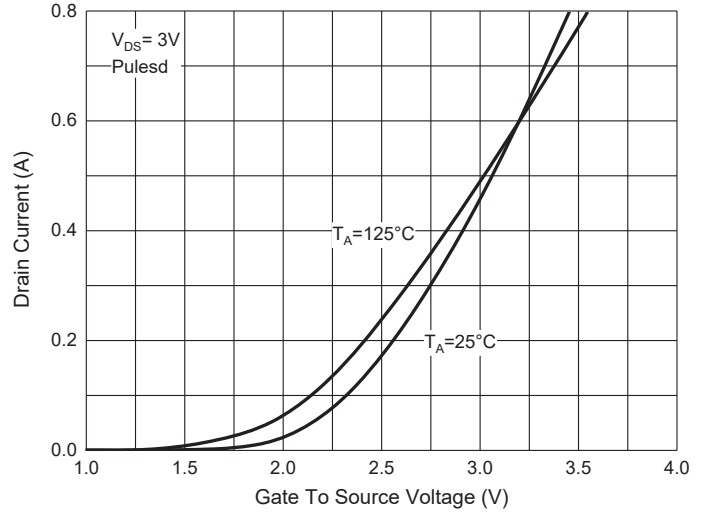


Fig. 3 - $R_{DS(ON)} - I_D$

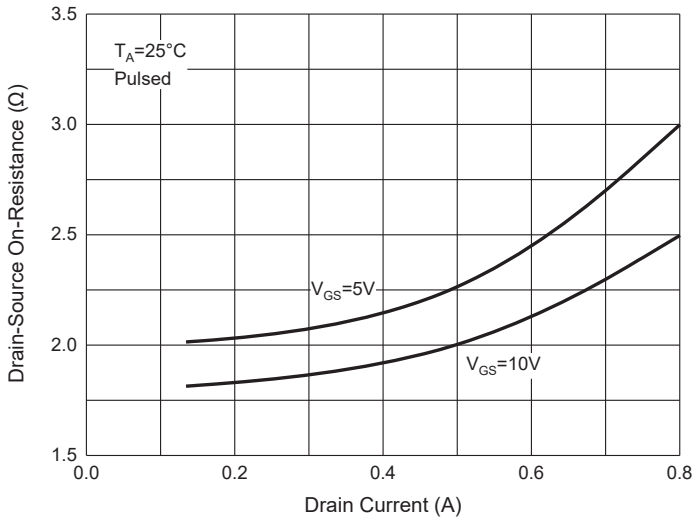


Fig. 4 - $R_{DS(ON)} - V_{GS}$

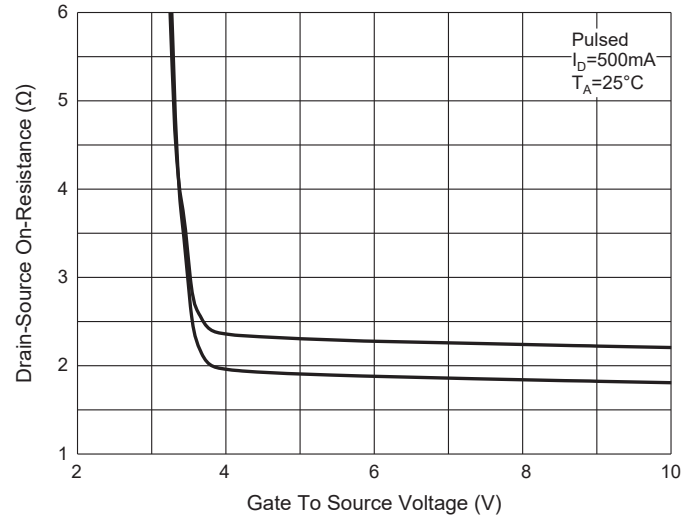


Fig. 5 - $I_S - V_{SD}$

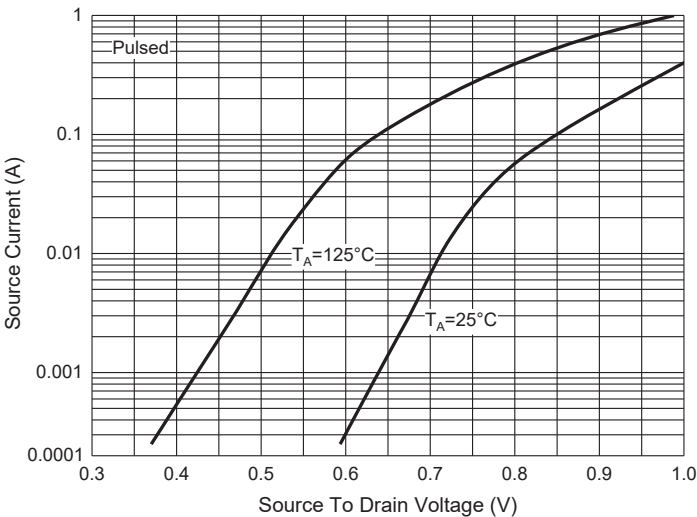
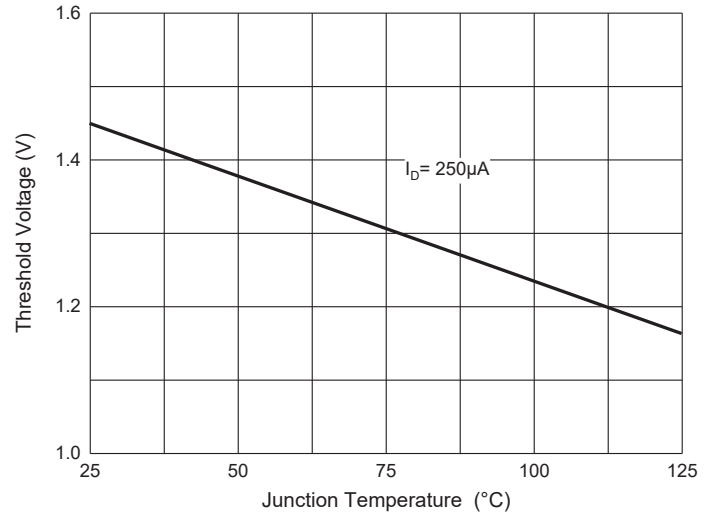


Fig. 6 - Threshold Voltage



Ordering Information

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

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