Features

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

N-Channel MOSFET

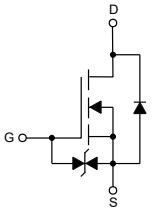
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 357°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	0.35	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.

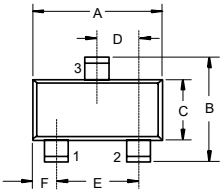
Internal Structure

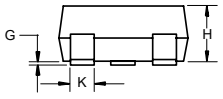


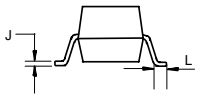
1. GATE
2. SOURCE
3. DRAIN

Marking:72K

SOT-23

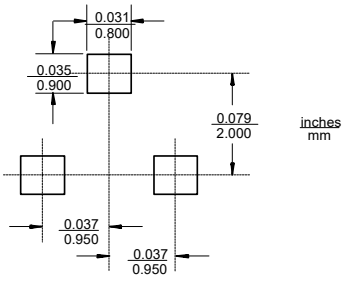






DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250μA	60			V
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	1.0	1.3	2.5	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=48V, V_{GS}=0V			1.0	μA
Gate-Body Leakage	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	μA
		V_{DS}=0V, V_{GS}=±10V			±200	nA
		V_{DS}=0V, V_{GS} =±5V			±100	nA
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=300mA			1.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V, I_D=500mA			2.5	Ω
		V_{GS}=4.5V, I_D=200mA			3.0	
Recovered Charge	Q_r	V_{GS}=0V, I_S=300mA,V_R=25V, dI/dt=-100A/μs		30		nC
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	
Turn-On Time	$t_{d(on)}$	V_{DD}=50V,R_L=250Ω, R_{GS}=50Ω,V_{GS}=10V, R_{GEN}=50Ω			10	ns
Turn-Off Time	$t_{d(off)}$				15	
Reverse Recovery Time	t_{rr}	V_{GS} =0V, I_S =300mA,V_R=25V, dI/dt=-100A/μs		30		

Curve Characteristics

Fig. 1 - Output Characteristics

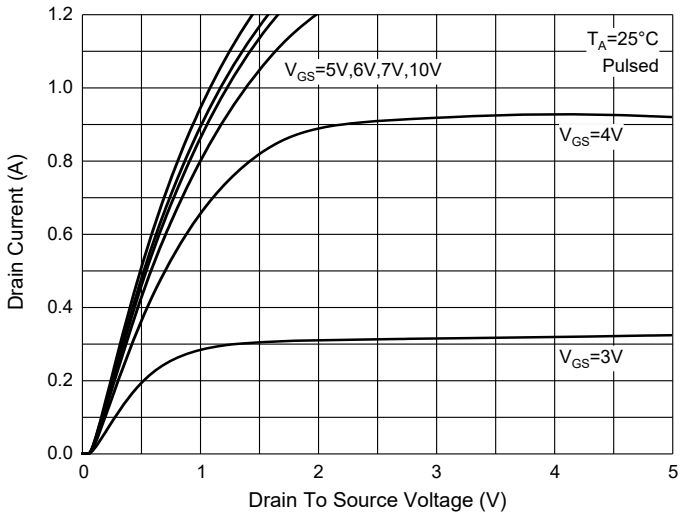


Fig. 2 - Transfer Characteristics

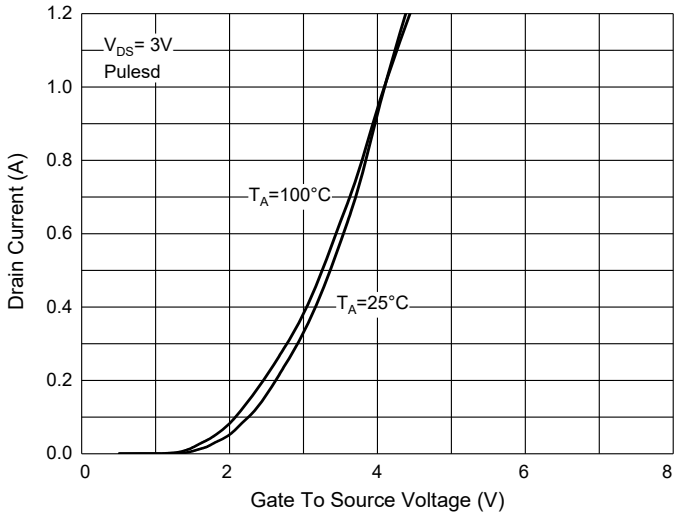


Fig. 3 - $R_{DS(ON)}$—I_D

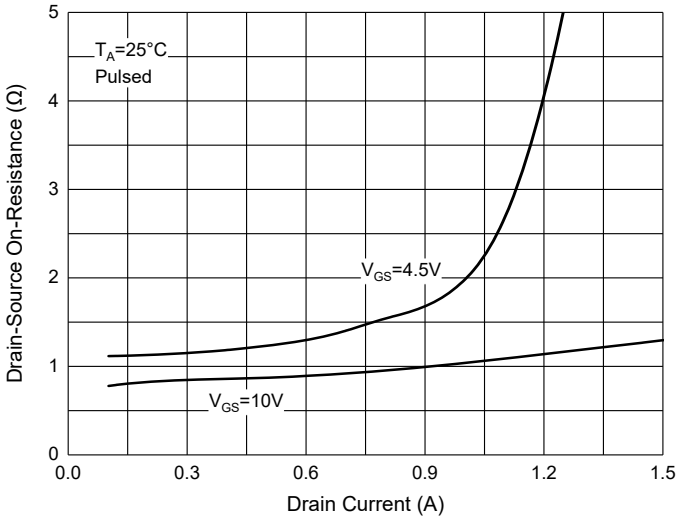


Fig. 4 - $R_{DS(ON)}$—V_{GS}

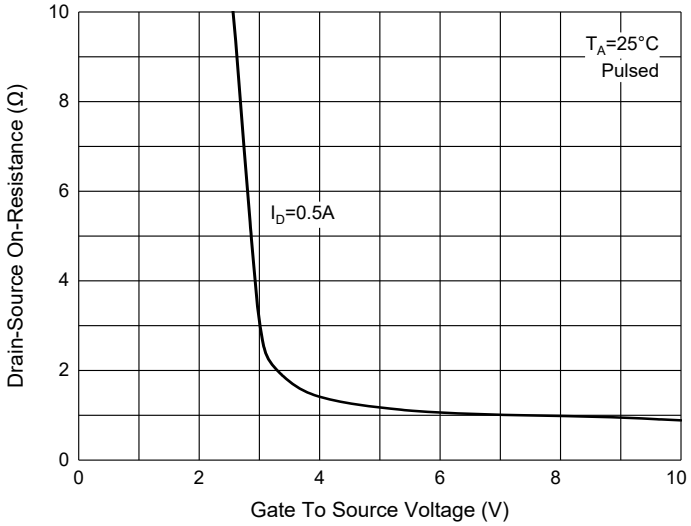


Fig. 5 - I_S—V_{SD}

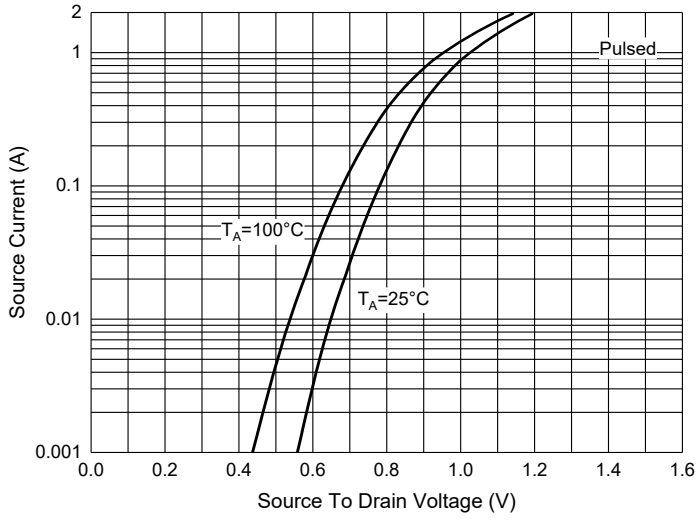
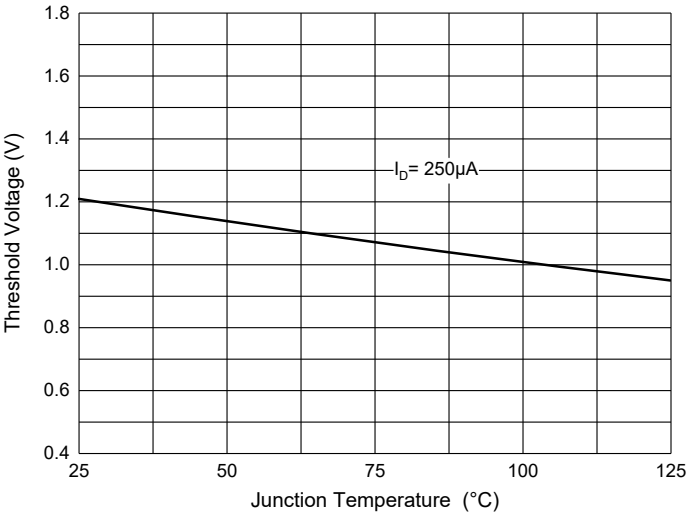
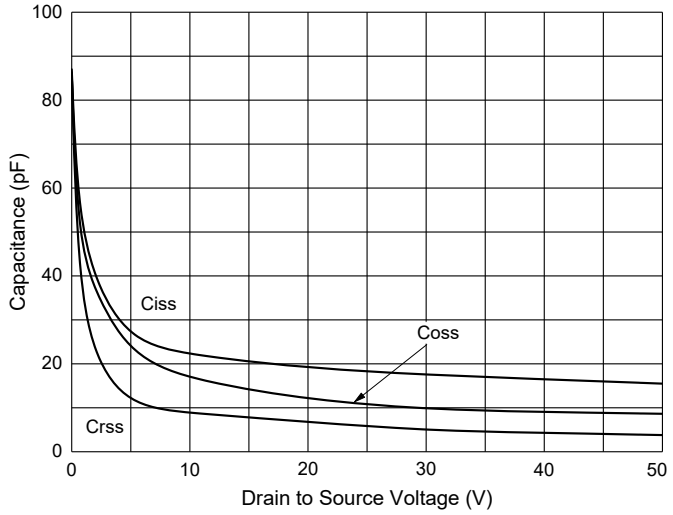


Fig. 6 - Threshold Voltage



Curve Characteristics

Fig. 7 - Capacitance Characteristics



Ordering Information

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

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