

Features

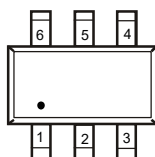
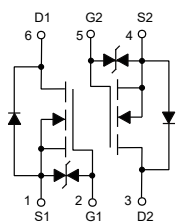
- High Density Cell Design For Low $R_{DS(ON)}$
- Voltage Controlled Small Signal Switch
- High Saturation Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P"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

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	I_D	340	mA
Total Power Dissipation	P_D	150	mW

Circuit and Pin Schematic

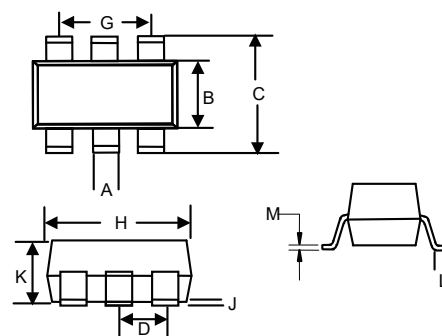


Dot denotes Pin1

Marking:72K

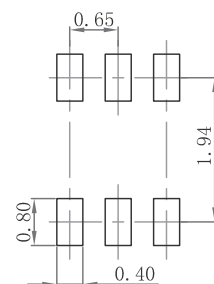
**DUAL
N-CHANNEL
MOSFET**

SOT-363



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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°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 ⁽¹⁾	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=1mA$	1.0		2.5	V
Gate-Body Leakage	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=48V, V_{GS}=0V$			1	μA
Drain-Source On-Resistance ⁽¹⁾	$R_{DS(on)}$	$V_{GS}=10V, I_D=500mA$			5	Ω
		$V_{GS}=4.5V, I_D=200mA$			5.3	
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=300mA$			1.5	V
Recovered Charge	Q_r	$V_{GS}=0V, I_S=300mA, V_R=25V,$ $dI_S/dt=-100A/\mu s$		30		nC
Dynami Characteristics⁽²⁾						
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⁽²⁾						
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=50V, V_{GS}=10V, R_L=250\Omega,$ $R_{GS}=50\Omega, R_{GEN}=50\Omega$			10	ns
Turn-Off Delay Time	$t_{d(off)}$				15	
Reverse Recovery Time	t_{rr}	$V_{GS}=0V, I_S=300mA,$ $V_R=25V, dI_S/dt=-100A/\mu s$		30		
Gate-Source Zener Diode						
Gate-Source Breakdown Voltage	BV_{GSO}	$I_{gs}=\pm 1mA$ (Oper Drain)	± 21.5		± 30	V

 Note: 1. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

2. These Parameters Have No Way to Verify.

Curve Characteristics

Fig. 1 - Output Characteristics

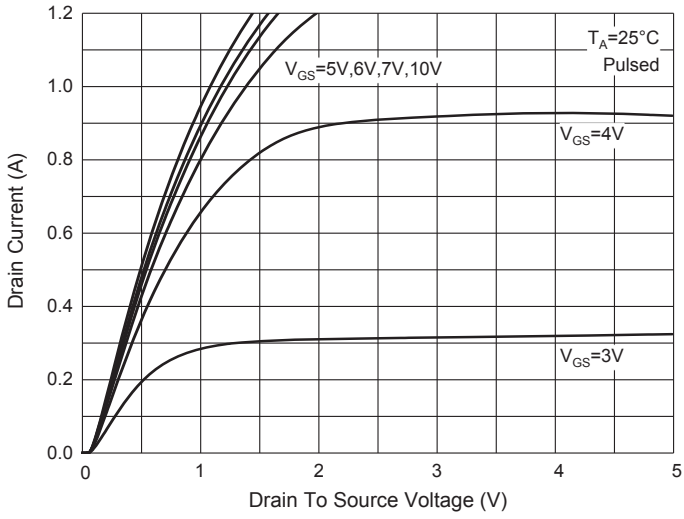


Fig. 2 - Transfer Characteristics

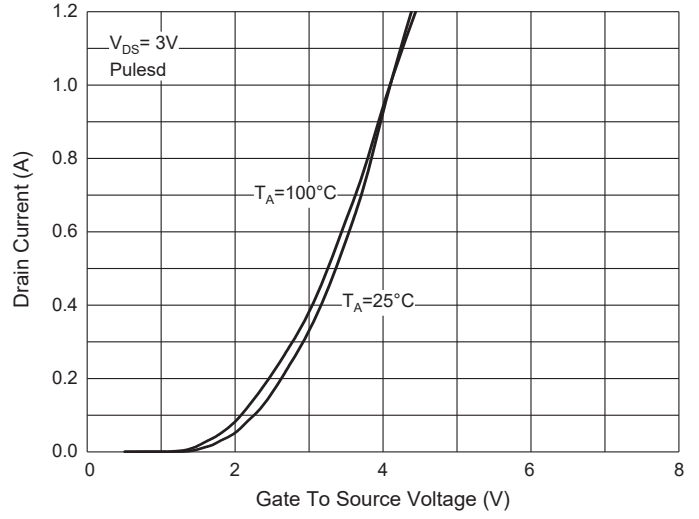


Fig. 3 - $R_{DS(ON)} - I_D$

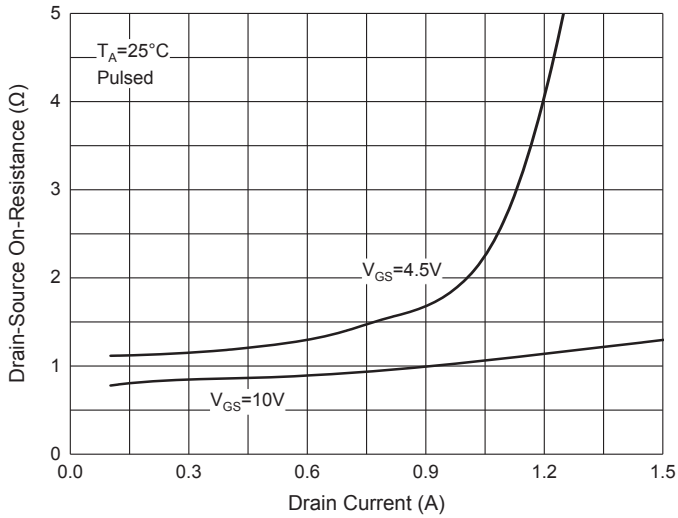


Fig. 4 - $R_{DS(ON)} - V_{GS}$

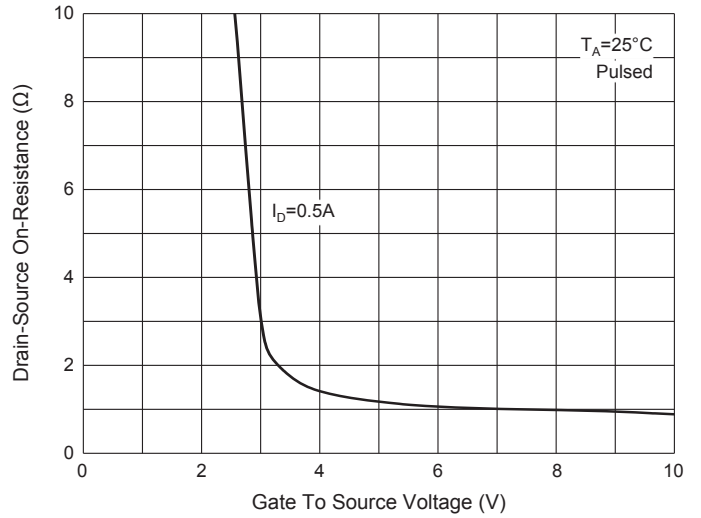


Fig. 5 - $I_S - V_{SD}$

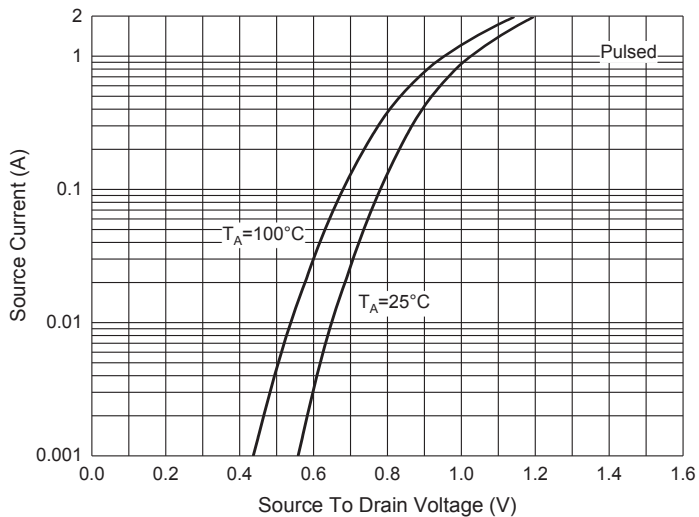
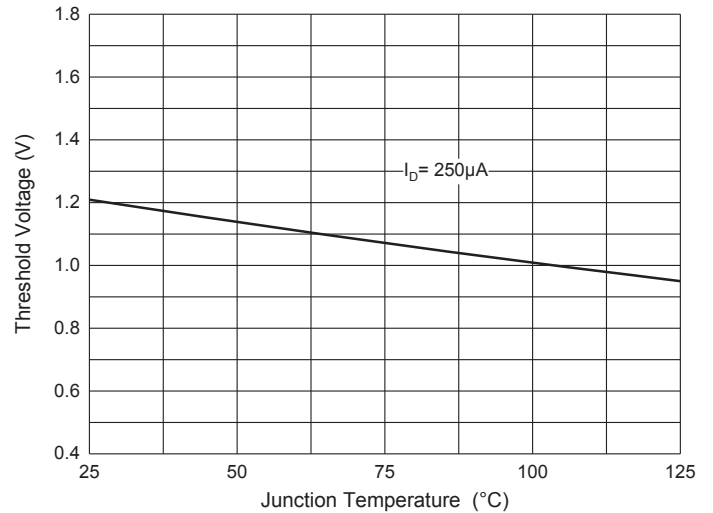


Fig. 6 - Threshold Voltage



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9