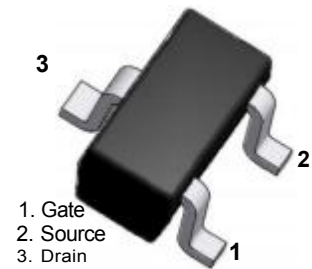


Plastic Package N-Channel MOSFET

Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Continuous Gate-Source Voltage	$\pm 20\text{V}$	V
I_D	Continuous Drain Current	340	mA
P_D	Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^\circ\text{C}/\text{W}$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the device may be impaired.

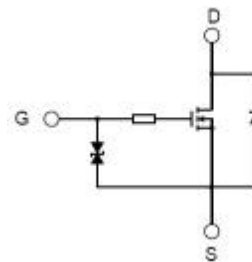


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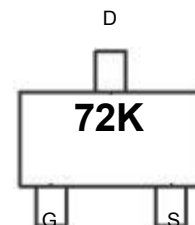
Specification Features:

- ◇ Epoxy meets UL 94 V-0 flammability rating
- ◇ High density cell design for low $R_{DS(ON)}$
- ◇ Voltage controlled small signal switch
- ◇ Rugged and reliable
- ◇ ESD Protected up to 2KV (HBM)

Electrical Symbol:



Device Marking Code:



Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Off Characteristics

Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=10\mu A$	60			Volts
I_{GSS}	Gate-Body Leakage	$V_{DS}=0V, V_{GS}=\pm 10V$			± 200	nA
		$V_{DS}=0V, V_{GS}=\pm 5V$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=48V, V_{GS}=0V$			1	μA

On Characteristics

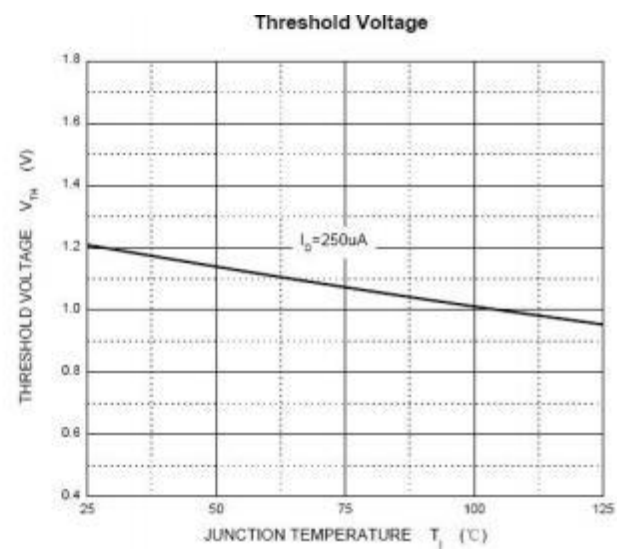
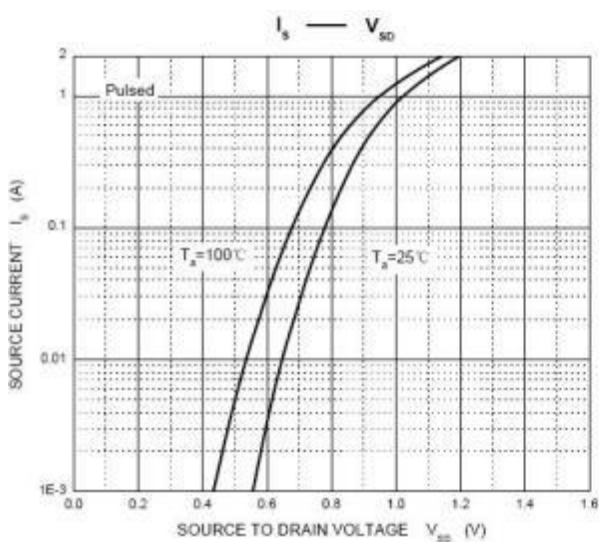
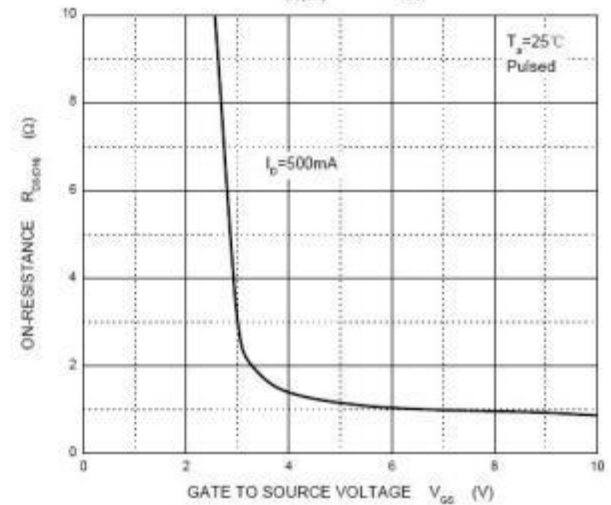
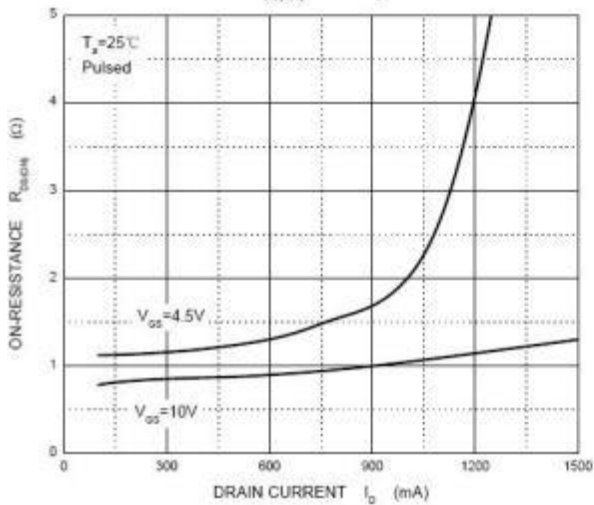
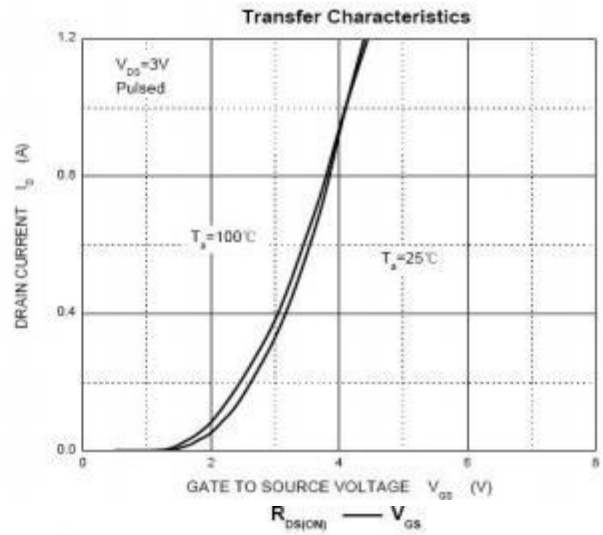
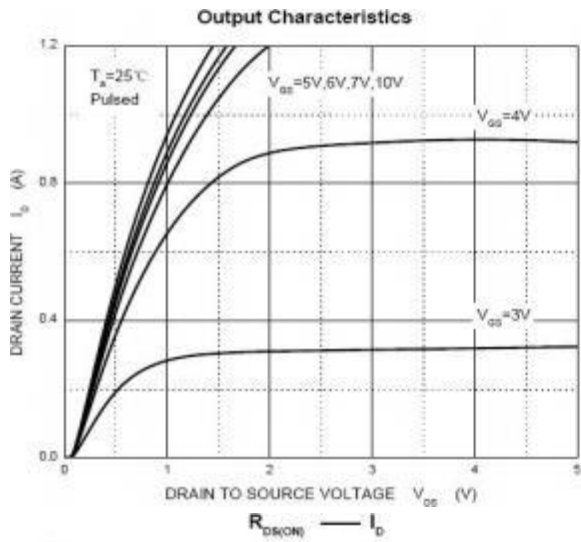
Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
$V_{th(GS)}$	Gate-Threshold Voltage	$V_{DS}=V_{GS}, I_D=1mA$	1		2.5	Volts
$I_{D(ON)}$	On-state Drain Current	$V_{GS}=10V, V_{DS}=7V$	500			mA
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V, I_D=500mA$			5.0	Ω
		$V_{GS}=4.5V, I_D=200mA$			5.3	Ω
q_r	Recovered charge	$V_{GS}=0V, I_S=300mA,$ $V_R = 25V,$ $DI_S/dt = -100A/\mu s$	--	--	30	nC
$V_{DS(on)}$	Drain-Source On-Voltage	$V_{GS}=10V, I_D=500mA$			3.75	V
		$V_{GS}=5V, I_D=50mA$			0.375	V
V_{SD}	Diode Forward Voltage	$I_S=300mA, V_{GS}=0V$			1.5	V

Dynamic Characteristics

Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
C_{iss}	Input Capacitance		--	--	40	pF
C_{oss}	Output Capacitance	$V_{DS} = 10V, V_{GS} = 0V,$ $f = 1.0MHz$	--	--	30	pF
C_{rss}	Reverse Transfer Capacitance		--	--	10	pF

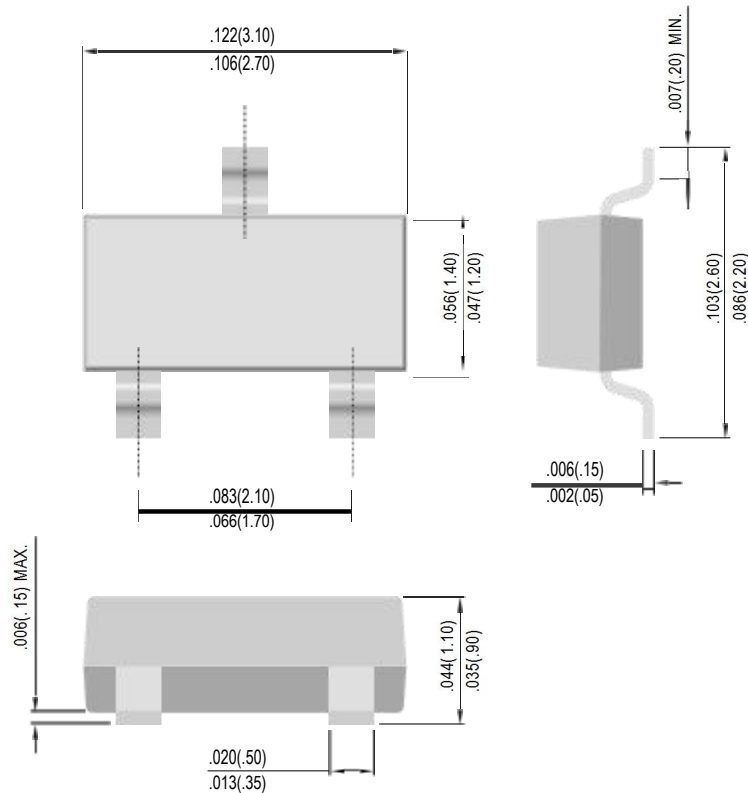
Switching Characteristics

Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
$t_{D(on)}$	Turn-on Time	$V_{DD}=50V, R_L=250\Omega,$	--	--	10	nS
$t_{D(off)}$	Turn-off Time	$R_{GS}=50\Omega, V_{GS}=10V,$ $R_G=50\Omega$	--	--	15	nS
t_{rr}	Reverse recovery time	$V_{GS}=0V, I_S=300mA,$ $V_R = 25V,$ $DI_S/dt = -100A/\mu s$	--	--	30	nS

Typical characteristics


OUTLINE DRAWING

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