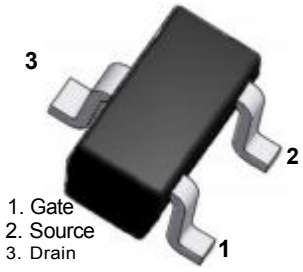
Plastic Package N-Channel MOSFET

Absolute Maximum Ratings T_A = 25°C unless otherwise noted

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

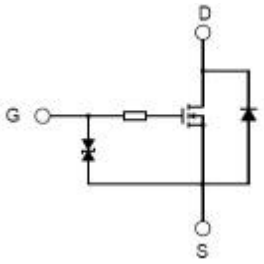
◇High density cell design for low $R_{DS(ON)}$

◇Voltage controlled small signal switch

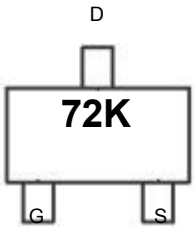
◇Rugged and reliable

◇ESD Protected up to 2KV (HBM)

Electrical Symbol:



Device Marking Code:



Electrical Characteristics (T_A = 25°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=10uA	60			Volts
I_{GSS}	Gate-Body Leakage	V_{DS}=0V, V_{GS}=±10V V_{DS}=0V, V_{GS}=±5V			±200 ±100	nA nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=48V, V_{GS}=0V			1	uA

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
g_r	Recovered charge	V_{gs} =0V, I_s=300mA, V_r = 25V , $DI_{s/dt}$ =-100A/us	--	--	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

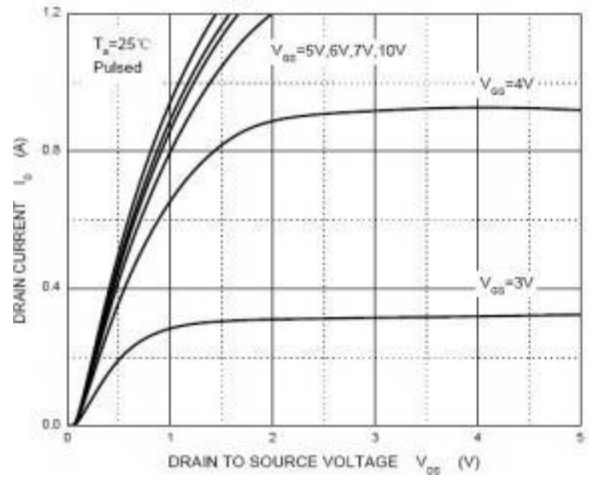
Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
Ciss	Input Capacitance		--	--	40	pF
Coss	Output Capacitance	V_{DS} = 10V, V_{GS} = 0V, f = 1.0MHz	--	--	30	pF
Crss	Reverse Transfer Capacitance		--	--	10	pF

Switching Characteristics

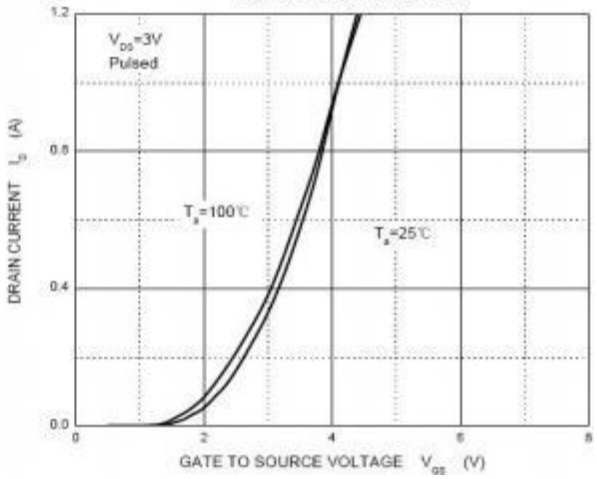
Symbol	Parameter	Test Condition	Limits			Unit
			Min	Typ	Max	
$t_{D(on)}$	Turn-on Time	V_{DD}=50V, R_L=250Ω,	--	--	10	nS
$t_{D(off)}$	Turn-off Time	R_{GS}= 50Ω ,V_{GS}=10V, R_G = 50Ω	--	--	15	nS
trr	Reverse recovery time	V_{GS}=0V, I_S=300mA, V_R = 25V , $DI_{s/dt}$ =-100A/us	--	--	30	nS

Typical characteristics

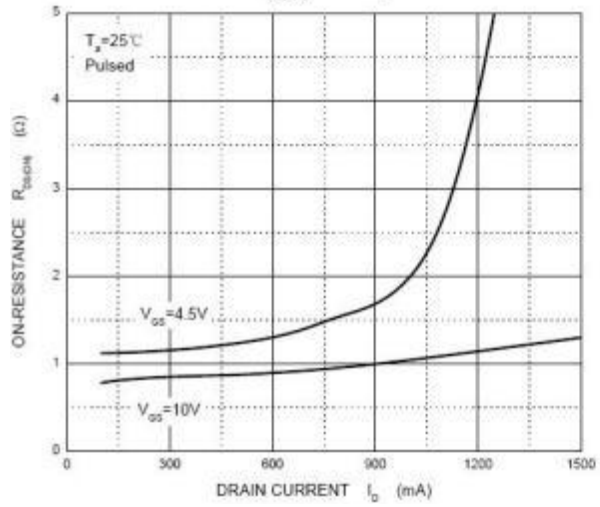
Output Characteristics



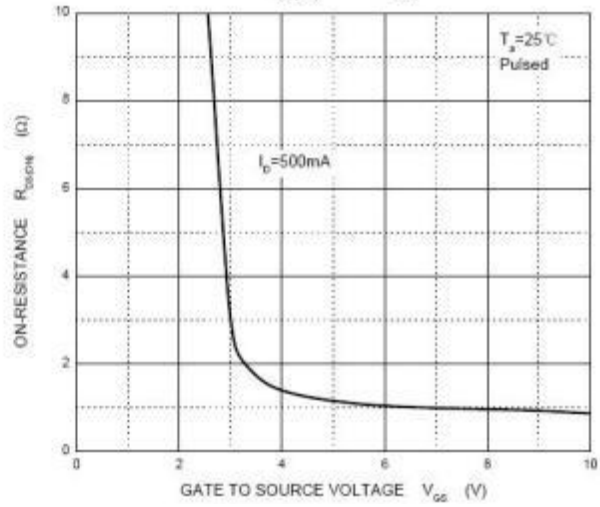
Transfer Characteristics



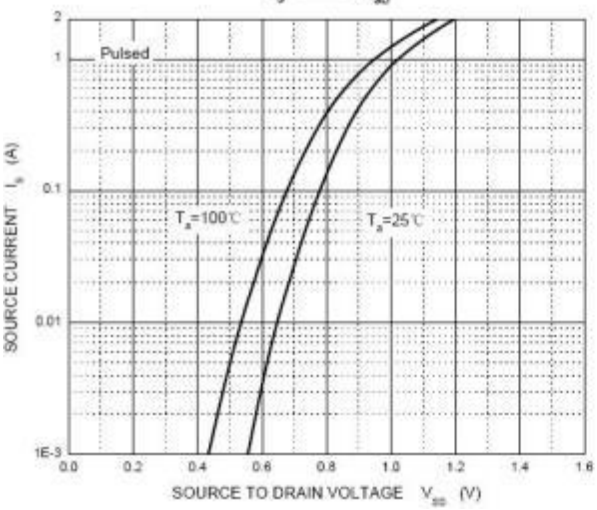
$R_{DS(ON)}$ — I_D



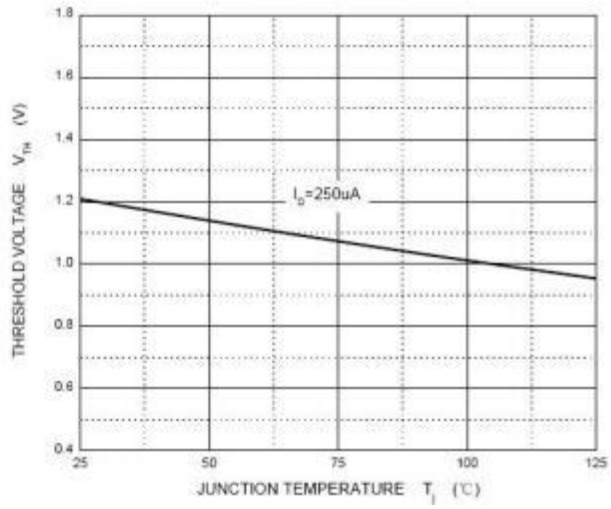
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



Threshold Voltage



OUTLINE DRAWING

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