

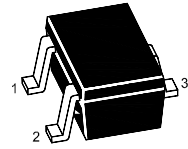
PJM7002KNSM

N-Enhancement Field Effect Transistor

Features

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switching
- High saturation current capability
- High speed switching
- ESD Protected

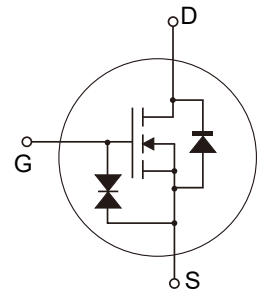
SOT-523



1. Gate 2. Source 3. Drain

Marking: 72K

Schematic diagram



Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Drain Source Voltage	V_{DSS}	60	V
Gate Source Voltage	V_{GSS}	± 20	V
Drain Current	I_D	340	mA
Continuous Pulsed		800	
Total Power Dissipation	P_{tot}	150	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Storage Temperature Range	T_j, T_{Stg}	150, - 55 to + 150	$^{\circ}\text{C}$



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

Symbol	Parameter	Test Conditions	Rating			Units
			Min.	Typ.	Max.	
Static Parameters						
V _{DSS}	Drain to Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	60	--	--	V
I _{DSS}	Drain to Source Leakage Current	V _{DS} =48V,V _{GS} =0V	--	--	1	μA
I _{GSS}	Gate to Source Forward Leakage	V _{DS} = 0V, V _{GS} = ±20V	--	--	±10	μA
R _{DS(ON)}	Drain-to-Source On-Resistance ^{Note1}	V _{GS} =10V,I _D =0.5A	--	0.9	5	Ω
		V _{GS} =4.5V,I _D =0.2A	--	1.1	5.3	Ω
V _{GS(TH)}	Gate Threshold Voltage ^{Note1}	V _{DS} =V _{GS} , I _D =1mA	1	1.3	2.5	V
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} =0V,V _{DS} =10V f=1.0MHz	--	--	40	pF
C _{oss}	Output Capacitance		--	--	30	
C _{rss}	Reverse Transfer Capacitance		--	--	10	
Switching Characteristics						
t _{d(ON)}	Turn-on Delay Time	V _{GS} =10V,V _{DD} =50V,R _G =50Ω	--	10	--	ns
t _{d(OFF)}	Turn-Off Delay Time	R _{GS} =50Ω, R _L =250Ω	--	15	--	
t _{rr}	Reverse Recovery Time	V _{GS} =0V,I _S =300mA,V _R =25V,dI _S /dt=-100A/us	--	30	--	
Q _r	Recovered Charge	V _{GS} =0V,I _S =300mA,V _R =25V,dI _S /dt=-100A/us	--	30	--	nC
Source-Drain Diode Characteristics						
I _{SD}	Continuous Source Current (Body Diode)		--	--	0.2	A
I _{SM}	Maximum Pulsed Current (Body Diode)		--	--	0.53	A
V _{SD}	Diode Forward Voltage	I _S =0.3A,V _{GS} =0V	--	--	1.5	V

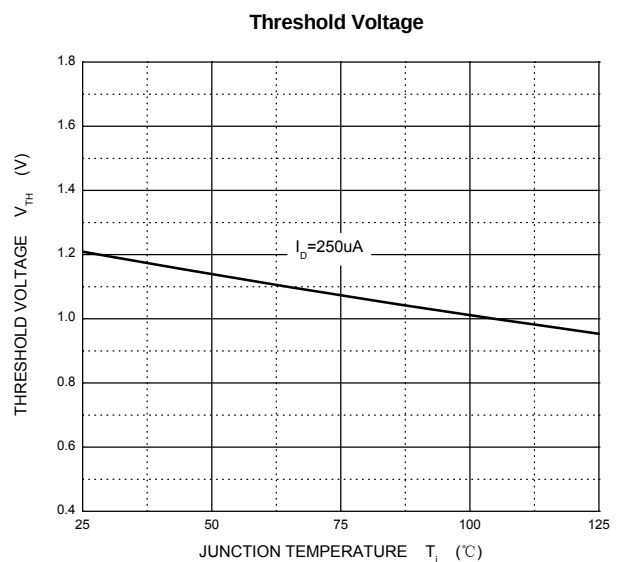
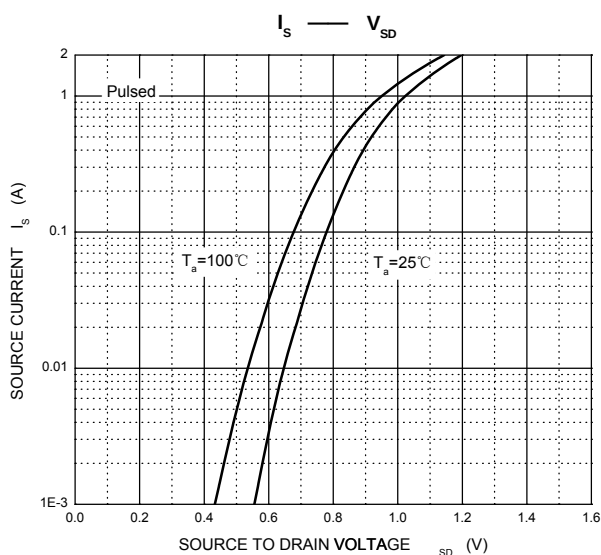
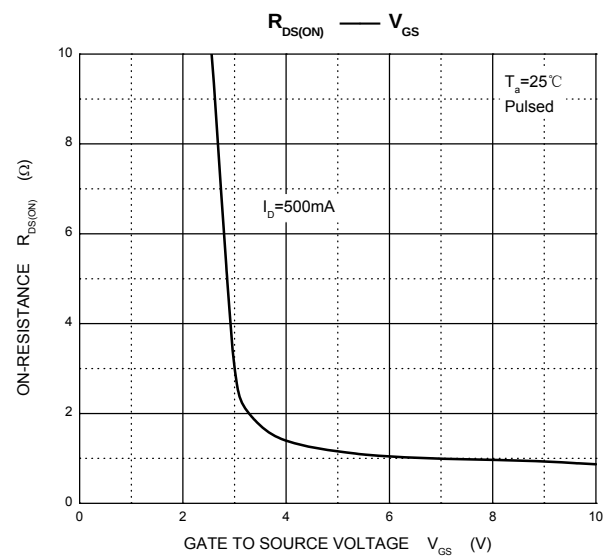
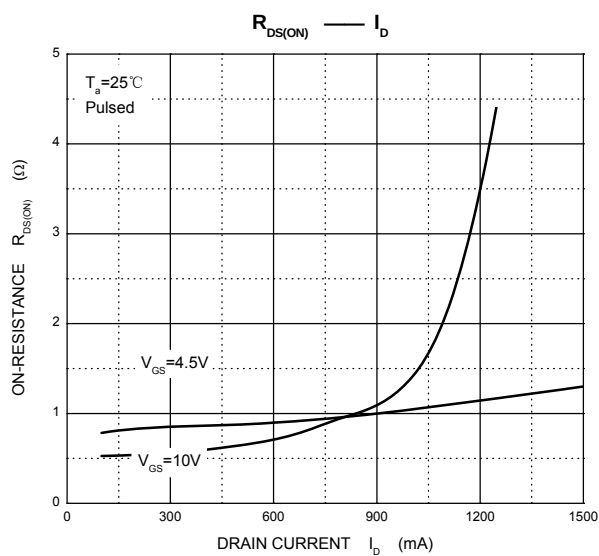
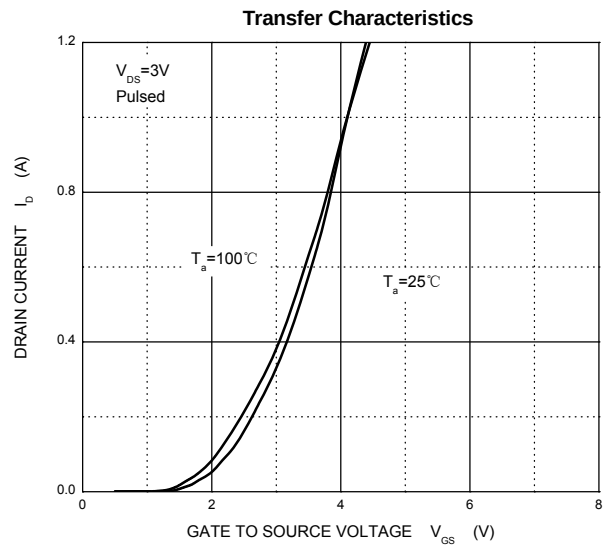
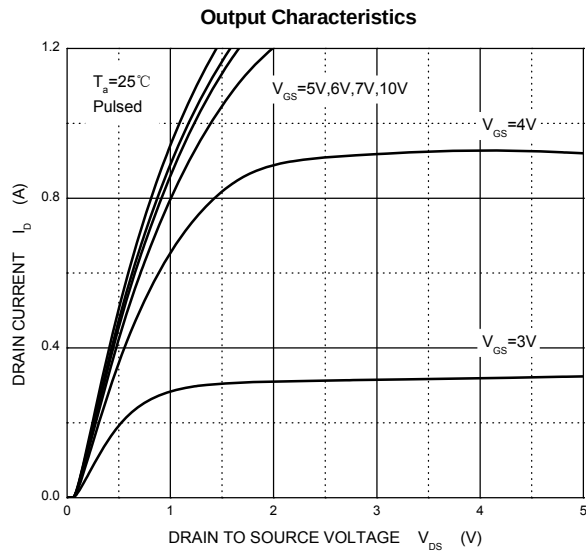
Note: 1. Pulse Test: Pulse width $\leq 300\mu s$, duty cycles $\leq 2\%$.



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Typical Characteristic Curves





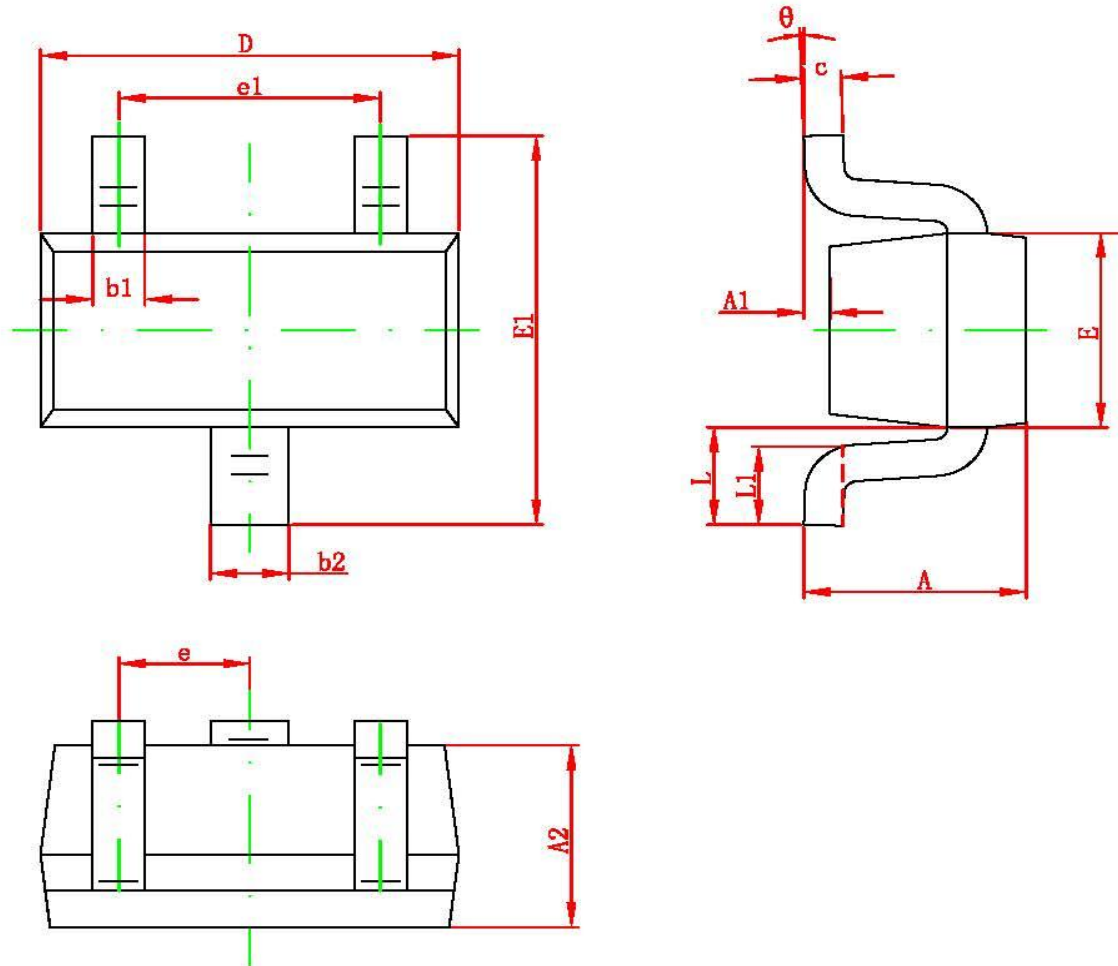
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Package Outline

SOT-523

Dimensions in mm



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°