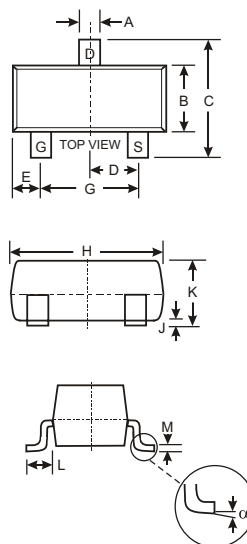


N-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

Features

- Low On-Resistance.
- Low Gate Threshold Voltage.
- Low Input Capacitance.
- Fast Switching Speed.
- Low Input/Output Leakage.
- Marking Code:7002



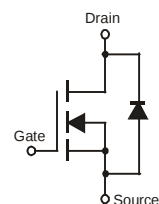
SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	60	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current	$T_A = 25^\circ\text{C}$ @ Steady State	I_D	340	mA
	$T_A = 70^\circ\text{C}$ @ Steady State		272	
Pulsed Drain Current ^A		I_{DM}	1.5	A
Total Power Dissipation @ $T_A = 25^\circ\text{C}$		P_D	350	mW
Thermal Resistance Junction-to-Ambient @ Steady State ^B		$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range		T_J, T_{STG}	-55~+150	$^\circ\text{C}$

A. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

B. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.



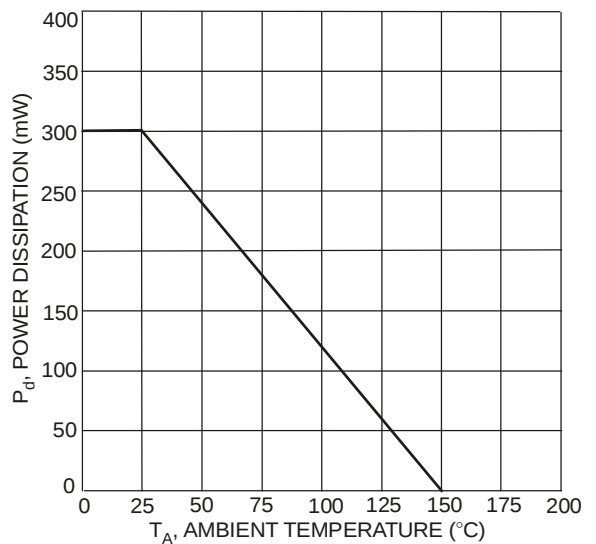
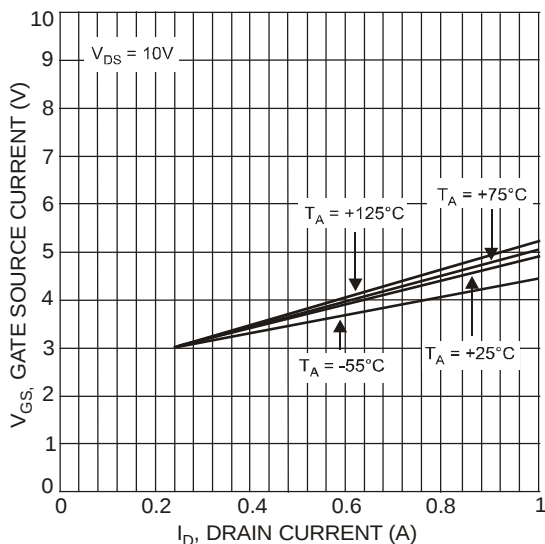
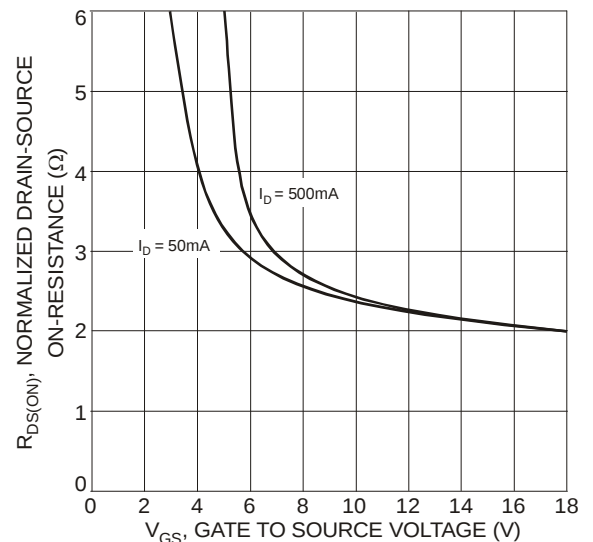
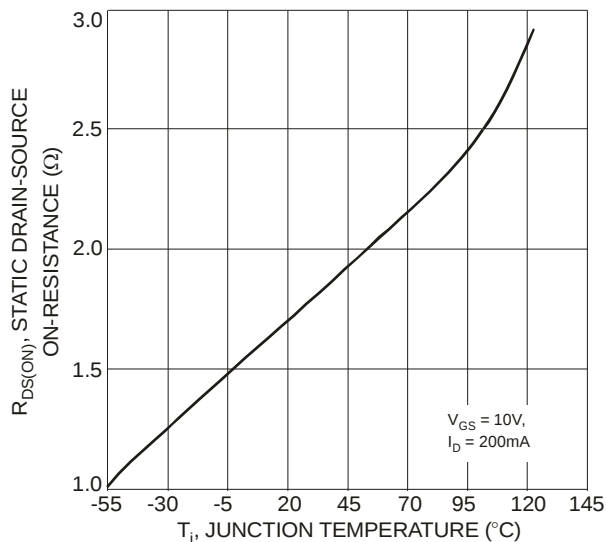
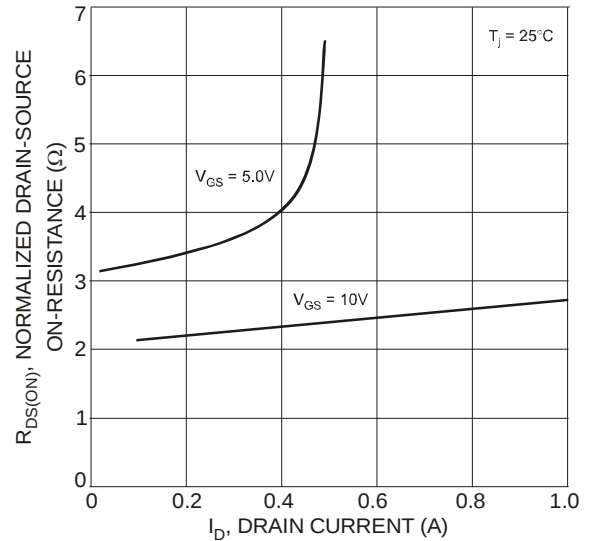
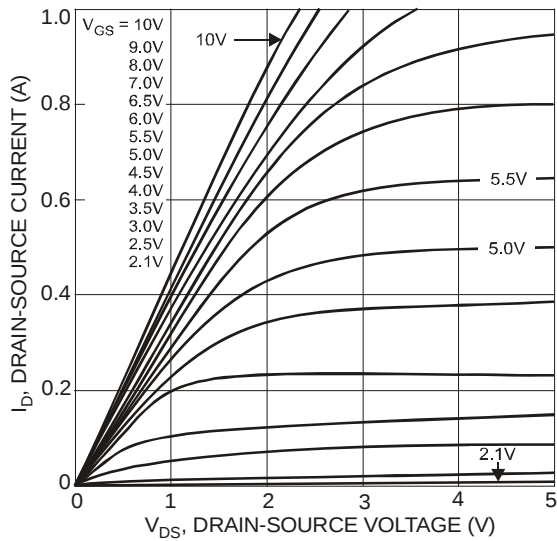
Equivalent Circuit

N-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTOR

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BVDSS	VGS= 0V, ID=250μA	60			V
Zero Gate Voltage Drain Current	IDSS	VDS=60V,VGS=0V			1	μA
Gate-Body Leakage Current	IGSS1	VGS= ±20V, VDS=0V			±100	nA
	IGSS2	VGS= ±10V, VDS=0V			±50	nA
Gate Threshold Voltage	VGS(th)	VDS= VGS, ID=250μA	0.9	1.5	2.7	V
Static Drain-Source On-Resistance	RDS(ON)	VGS= 10V, ID=-300mA		1.2	3.5	Ω
		VGS= 4.5V, ID=200mA		1.3	4.5	
Diode Forward Voltage	VSD	IS=300mA,VGS=0V			1.2	V
Maximum Body-Diode Continuous Current	IS				340	mA
Dynamic Parameters						
Input Capacitance	Ciss	VDS=60V,VGS=0V, f=1MHZ		16		
Output Capacitance	Coss			10		pF
Reverse Transfer Capacitance	Crss			5.5		
Switching Parameters						
Total Gate Charge	Qg	VGS=10V,VDS=60V, ID=0.3A		1.7	2.4	nC
Turn-on Delay Time	tD(on)	VGS=10V,VDD=30V, ID=300mA, RGEN=6Ω		5		ns
Turn-off Delay Time	tD(off)			17		
Reverse recovery Time	trr	VGS=0V,IS=300mA, VR=25V, dIS/dt=- 100A/μs		30		ns

TYPICAL TRANSIENT CHARACTERISTICS



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