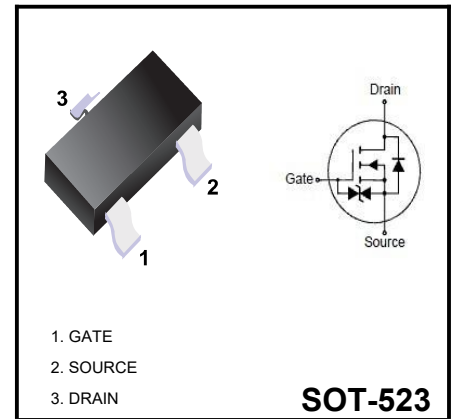


**N-Channel Enhancement Mode Field Effect Transistor**
**Features**

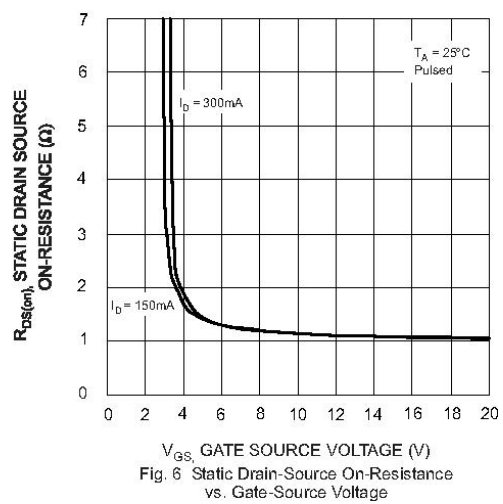
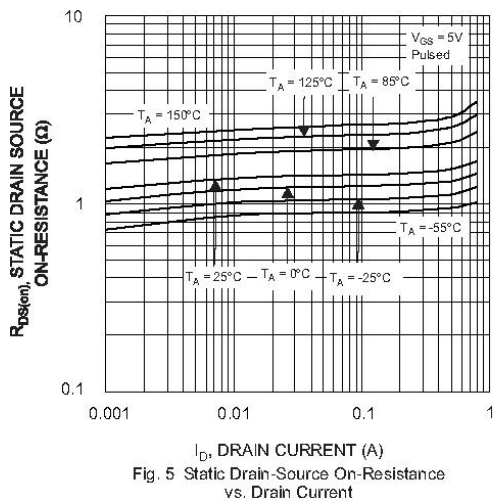
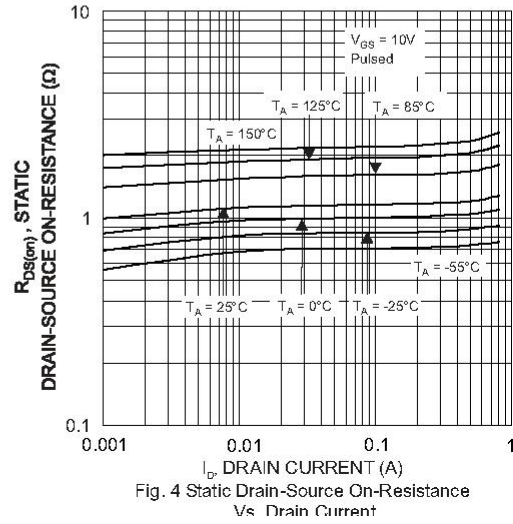
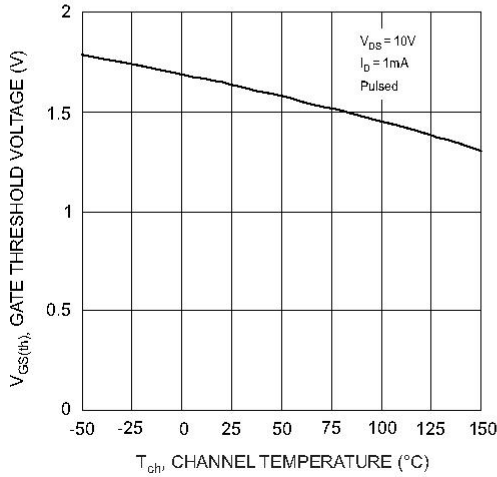
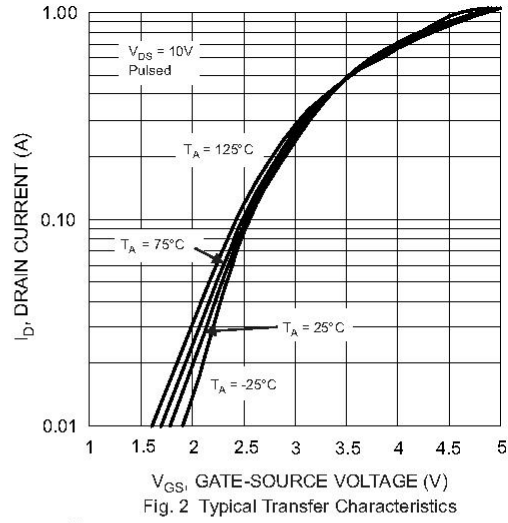
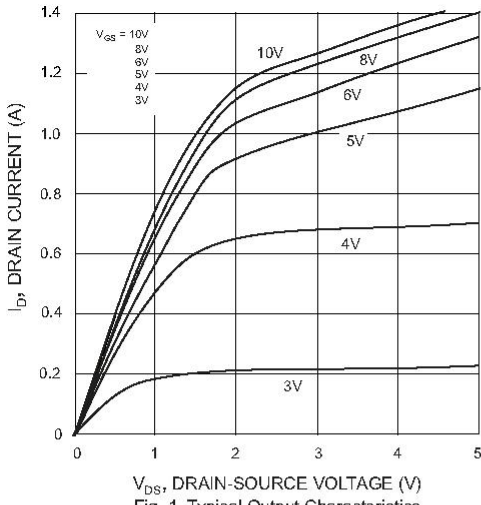
- ◆ Low on resistance  $R_{DS(ON)}$
- ◆ Low gate threshold voltage
- ◆ Low input capacitance
- ◆ ESD protected up to 2KV

**MARKING: 72K**

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DSS}$	60	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current (Continuous)	$I_D$	300	mA
Drain Current (Pulse Width $\leq 10 \mu\text{s}$ )	$I_{DM}$	800	mA
Total Power Dissipation	$P_{tot}$	350	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150	$^{\circ}\text{C}$

**Characteristics at  $T_a=25^{\circ}\text{C}$** 

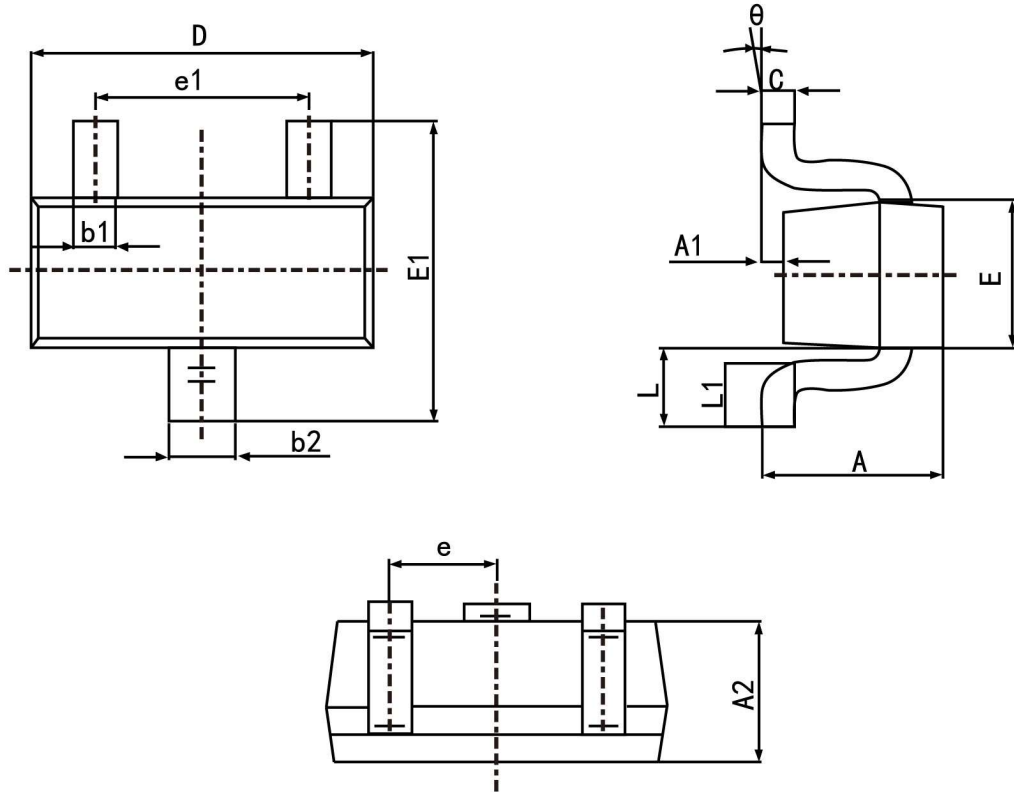
Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 10 \mu\text{A}$	$BV_{DSS}$	60	-	V
Zero Gate Voltage Drain Current at $V_{DS} = 60 \text{ V}$	$I_{DSS}$	-	1	$\mu\text{A}$
Gate Source Leakage Current at $V_{GS} = \pm 20 \text{ V}$	$I_{GSS}$	-	$\pm 10$	$\mu\text{A}$
Gate Threshold Voltage at $V_{DS} = 10 \text{ V}, I_D = 250 \mu\text{A}$	$V_{GS(th)}$	1	2.5	V
Static Drain Source On-Resistance at $V_{GS} = 10 \text{ V}, I_D = 500 \text{ mA}$ $V_{GS} = 4.5 \text{ V}, I_D = 200 \text{ mA}$	$R_{DS(ON)}$	- -	3 4	$\Omega$
Forward Transconductance at $V_{DS} = 10 \text{ V}, I_D = 200 \text{ mA}$	$g_{fs}$	80	-	mS
Input Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	$C_{iss}$	-	50	pF
Output Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	$C_{oss}$	-	25	pF
Reverse Transfer Capacitance at $V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	$C_{rss}$	-	5	pF



**Package Outline**

**SOT-523**

Plastic surface mounted package; 3 leads



Symbol	Dimension in Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
c	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500	TYP.
e1	0.900	1.100
L	0.400 REF.	
L1	0.260	0.460
$\theta$	0°	8°

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOT-523	Tape/Reel, 7" reel	3000	EIA-481-1