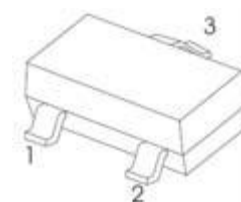
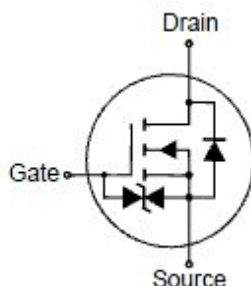


### N-Channel Enhancement Mode Field Effect Transistor

#### Features

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



1.Gate 2.Source 3.Drain  
SOT-23-3L Plastic Package

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DSS}$	60	V
Gate-Source Voltage	$V_{GSS}$	$\pm 20$	V
Drain Current (Continuous)	$I_D$	300	mA
Drain Current (Pulse Width $\leq 10\text{ }\mu\text{s}$ )	$I_{DM}$	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 $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Drain Source Breakdown Voltage at $I_D = 10\text{ }\mu\text{A}$	$BV_{DSS}$	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 $V_{DS} = 10\text{ V}, I_D = 250\text{ }\mu\text{A}$	$V_{GS(th)}$	1	2.5	V
Static Drain Source On-Resistance at $V_{GS} = 10\text{ V}, I_D = 500\text{ mA}$ at $V_{GS} = 4.5\text{ V}, I_D = 200\text{ mA}$	$R_{DS(ON)}$	- -	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



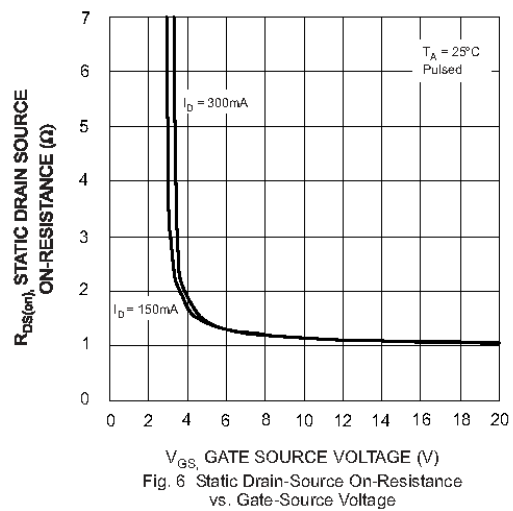
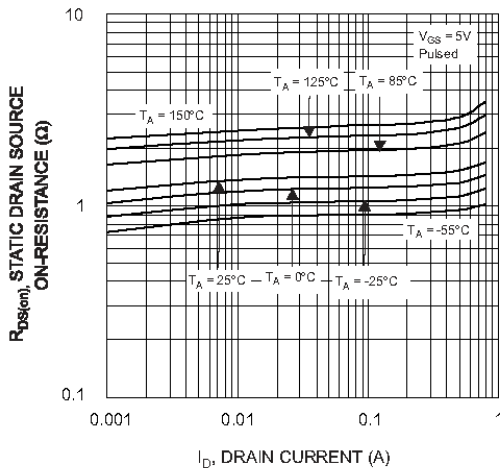
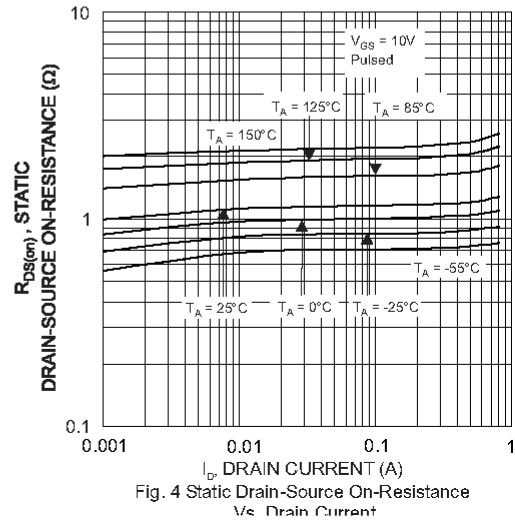
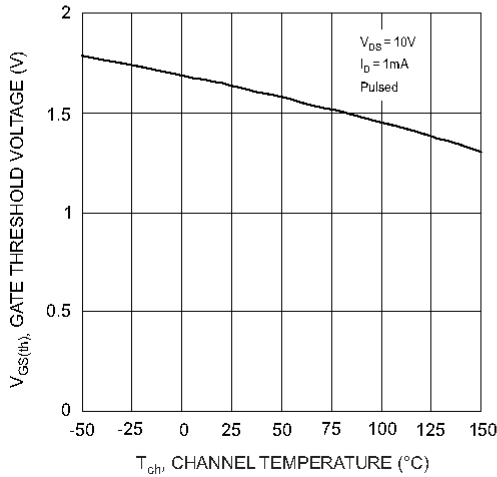
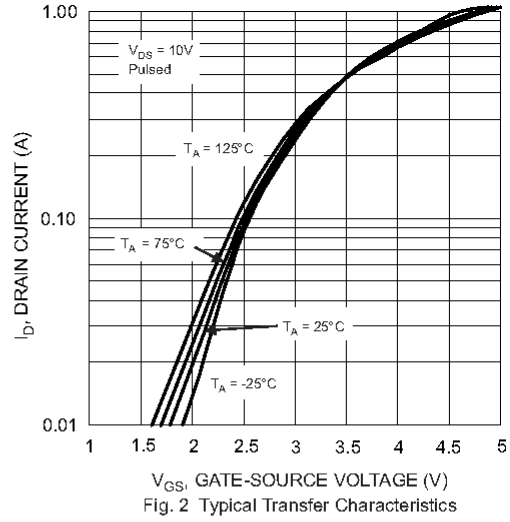
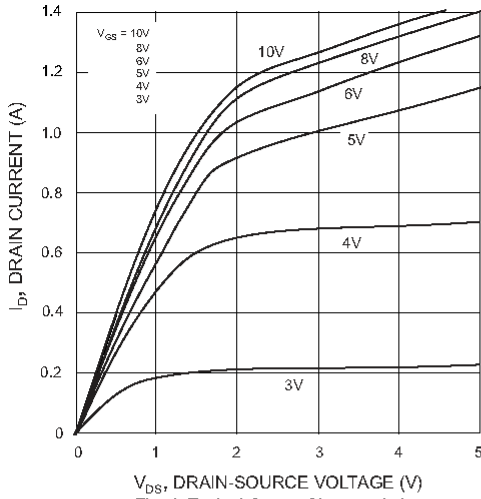
**CHINA BASE**  
INTERNATIONAL

**SOT-23-3L**

**MMBT7002K**

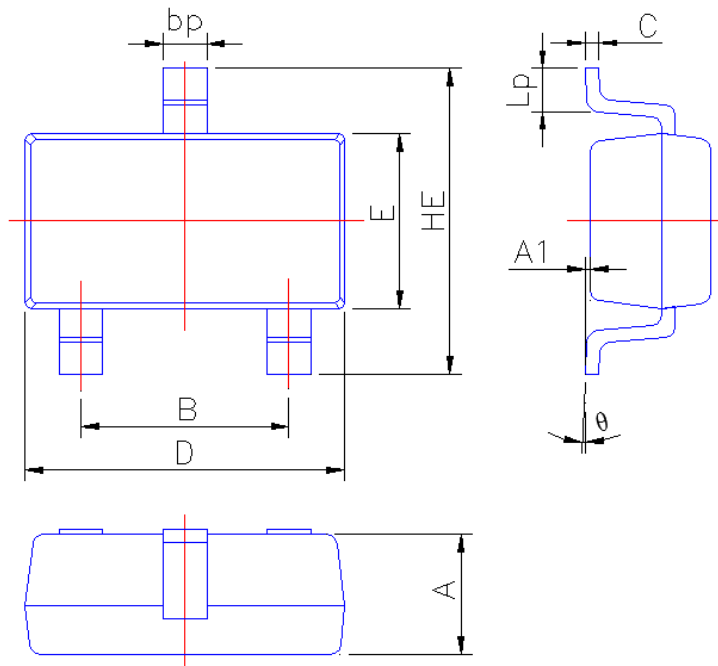


www.china-base.com.hk





## SOT-23-3L Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	1.05	1.20
A1	0.010	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.15
D	2.80	3.00
E	1.50	1.70
HE	2.60	3.00
Lp	0.25	0.55
$\theta$	2°	6°