

### Descriptions

Double N-CHANNEL MOSFET in a SOT23-6L Plastic Package.

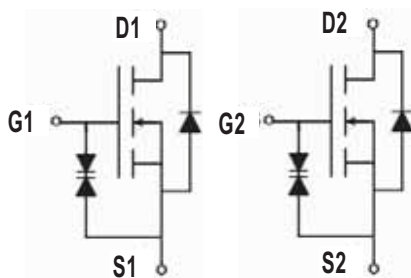
### Features

Sensitive gate trigger current and Low Holding current.ESD protected diode.  
ESD rating:2200V HBM

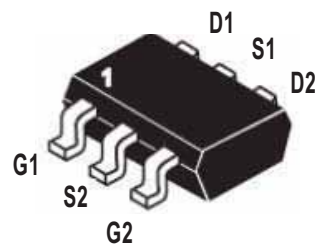
### Applications

Intended for use in general purpose switching and phase control applications.

### Equivalent Circuit



### Pinning



SOT-23-6L top view

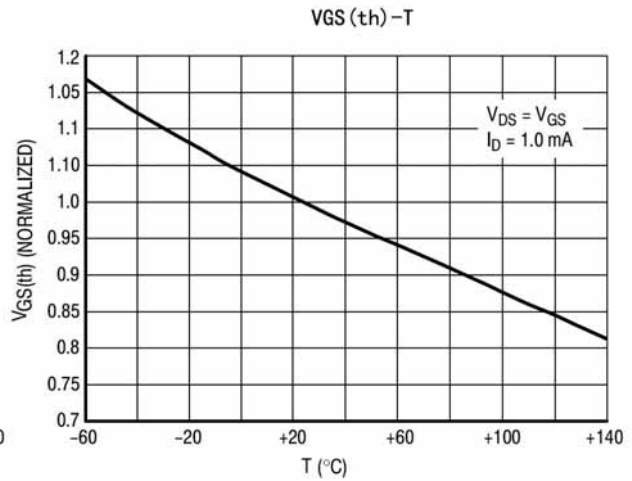
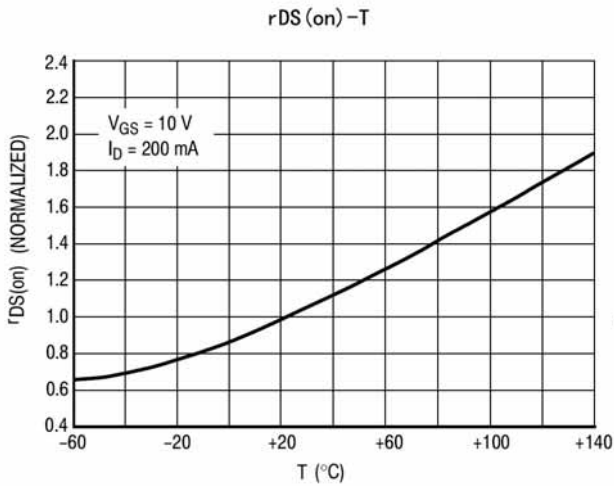
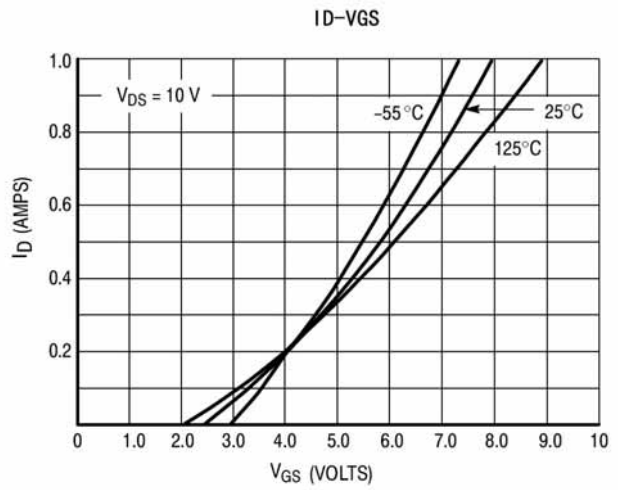
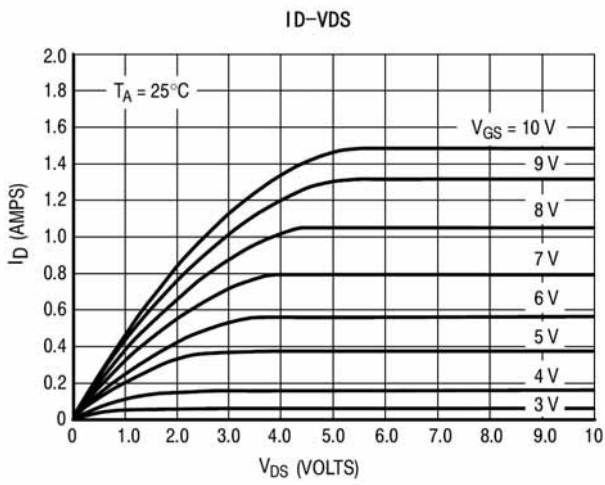
### Absolute Maximum Ratings(Ta=25 °C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	60	V
Drain-Gate Voltage	$V_{DGR}$	60	V
Maximum Drain Current - Continuous	$I_D$	250	mA
Maximum Drain Current - Pulsed	$I_{DM}$	800	mA
Gate-Source Voltage - Continuous	$V_{GSS}$	±20	V
Maximum Power Dissipation	$P_D$	350	mW
Storage Temperature Range	$T_{stg}$	-55~150	°C

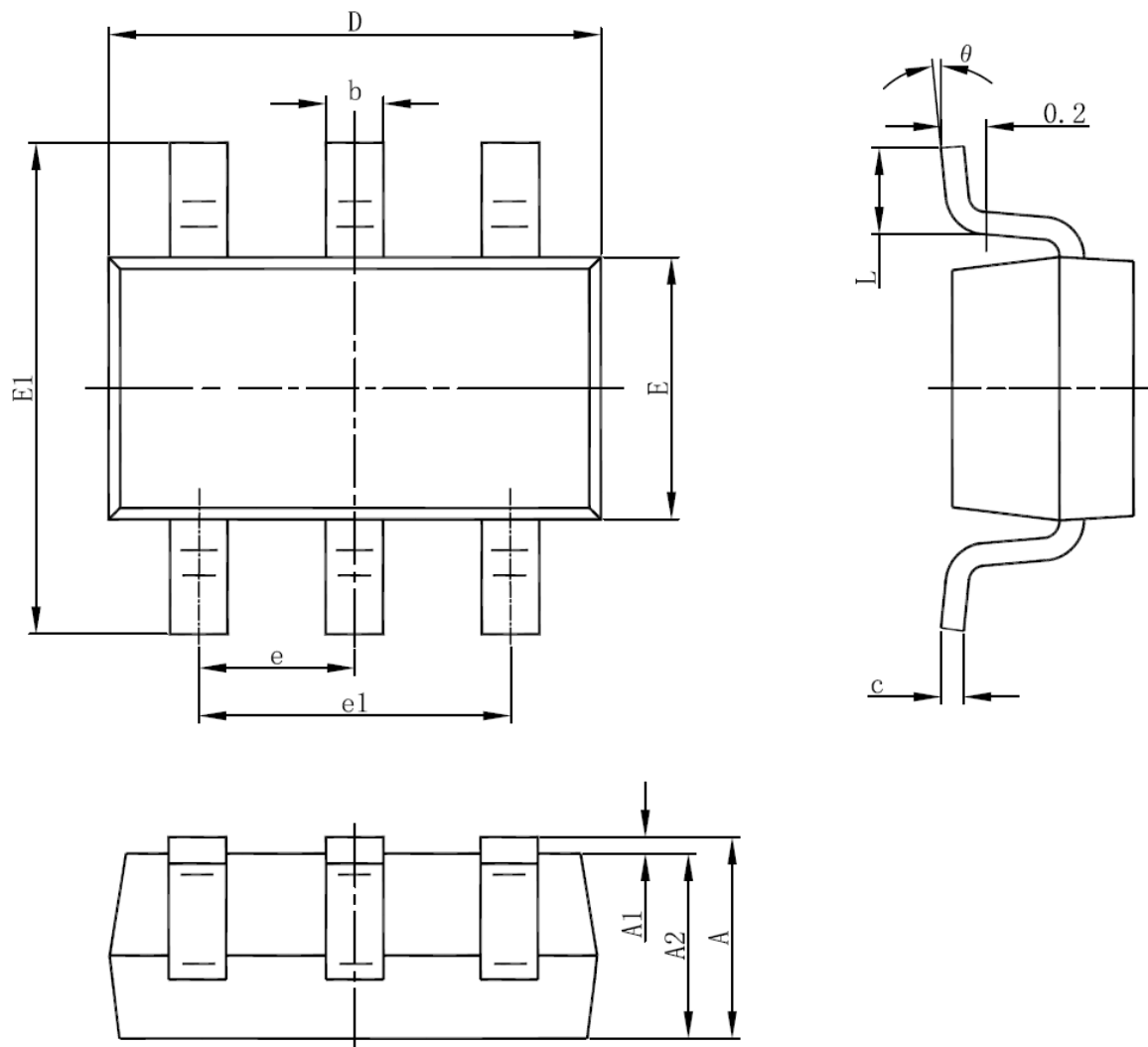
### Electrical Characteristics(Ta=25 °C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0$ $I_D=10\mu A$	60			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{GS}=0$ $V_{DS}=60V$ $T_J=25^\circ C$			1.0	$\mu A$
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{GS}=0$ $V_{DS}=60V$ $T_J=125^\circ C$			500	$\mu A$
Gate - Body Leakage	$I_{GSS}$	$V_{GS}=\pm 20V$ $V_{DS}=0V$			±10	nA
Static Drain-Source On-Resistance	$R_{DS(on)(1)}$	$V_{GS}=5V$ $I_D=0.05A$		1.5	3	$\Omega$
	$R_{DS(on)(2)}$	$V_{GS}=10V$ $I_D=0.5A$		1.3	3	$\Omega$
Forward Transconductance	$g_{FS}$	$V_{DS}=10V$ $I_D=0.2A$	80			mS
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V$ $I_S=250mA$			1.5	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0		1.9	V
On-State Drain Current	$I_{D(on)}$	$V_{DS} \geq 2.0V_{DS(on)}$ $V_{GS}=10V$	500			mA
Drain-Source On-Voltage	$V_{DS(on)(1)}$	$V_{GS}=10V$ $I_D=500mA$			2.5	V
	$V_{DS(on)(2)}$	$V_{GS}=5.0V$ $I_D=50mA$			0.27 5	V
Turn-On Time	$t_{d(on)}$	$V_{DD}=30V$ $I_D=200mA$ $R_G=25\Omega$		7.5	20	ns
Turn-Off Time	$t_{d(off)}$	$R_L=150\Omega$ $V_{gen}=10V$		11	20	ns

## RATING AND CHARACTERISTICS CURVES ( 2N7002K36)

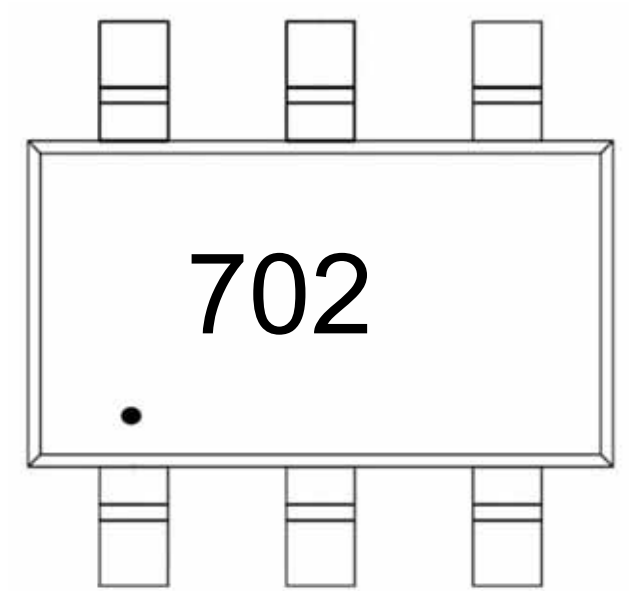


## SOT23-6L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
$\theta$	0°	8°	0°	8°

## Marking Instructions



Note:

● : "1" Pin

702 : Product Type Code

Package	Tube (pcs/tube)	Tube (pcs/inner box)	Tube (pcs/cartoon)	Tape&Reel (pcs/reel)	Tape&Reel (pcs/inner box)	Tape&Reel (pcs/cartoon)
DFN	100	10,000	100,000	2,500	5,000	40,000
SOP-8	100	10,000	100,000	4,000	4,000	20,000
TSSOP-8	100	32,000	128,000	3,000	6,000	48,000
SOT-23-3L	—	—	—	3,000	30,000	120,000
SOT-23-6L	—	—	—	3,000	30,000	120,000
SOT-23(6R)	—	—	—	3,000	30,000	120,000
SOT-363	—	—	—	3,000	30,000	120,000
SOT-523	—	—	—	3,000	30,000	120,000
SOT223	—	—	—	2,500	2,500	20,000
TO-220	50	1,000	5,000	—	—	—
TO-220F	50	1,000	10,000	—	—	—
TO-247	30	300	1,200	—	—	—
TO-251	80	4,000	40,000	—	—	—
TO-251S(4R)	80	4,000	40,000	—	—	—
TO-252-2L(4R)	80	4,000	40,000	2,500	2,500	25,000
TO-263-2L	50	1,000	10,000	800	800	8,000
TO-3P	30	300	3,000	—	—	—
TO-92	—	—	—	1,000(袋装)	10,000	100,000