

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
60V	1.1 Ω @10V	340mA
	1.4 Ω @4.5V	

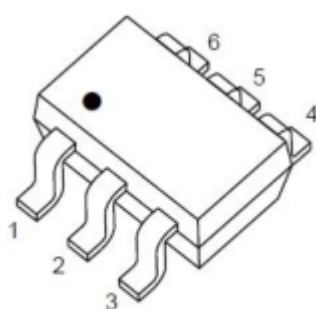
Feature

- Super high density cell design for extremely low $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- Capable doing Cu wire bonding
- ESD protected Gate HBM 2KV

Application

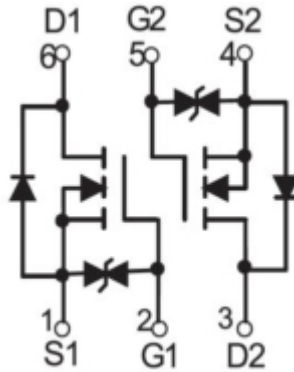
- Power Management in Note book
- Portable Equipment
- Battery Powered System

Package



SOT-563

Circuit diagram



Marking



72K =Device Code

Absolute maximum ratings

($T_a=25^{\circ}\text{C}$ unless otherwise noted)

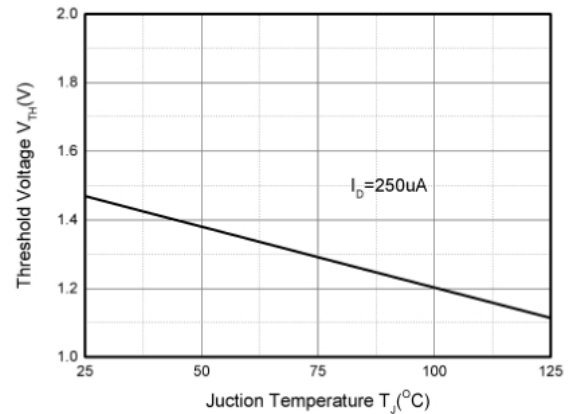
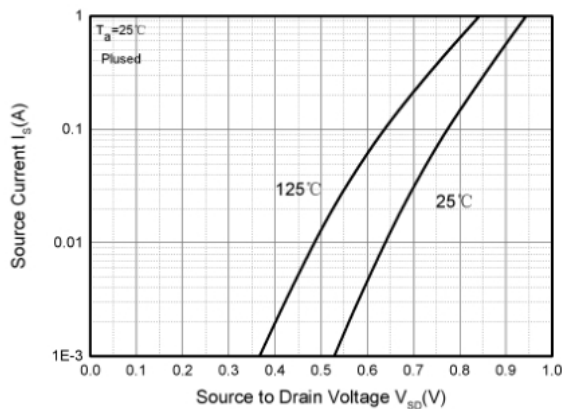
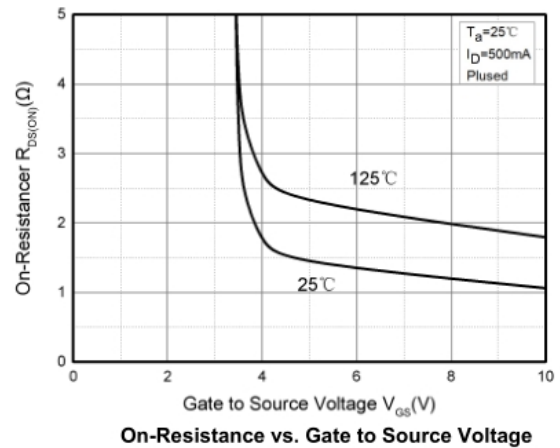
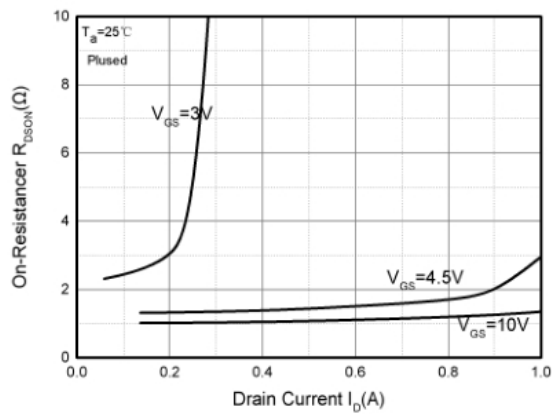
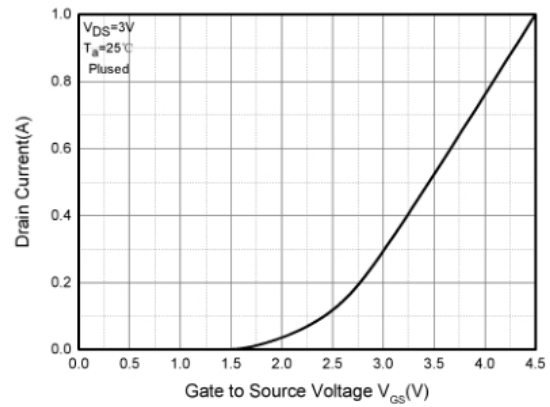
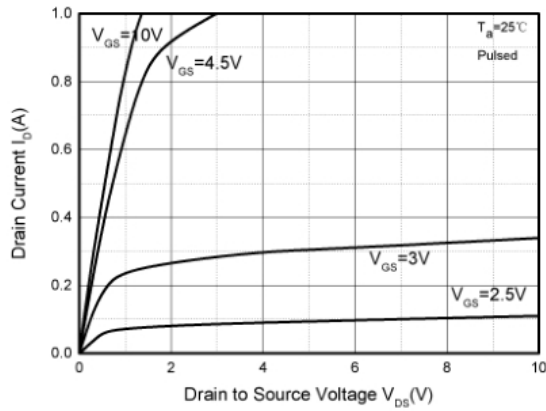
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	340	mA
Power Dissipation	P_D	350	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

Electrical characteristics

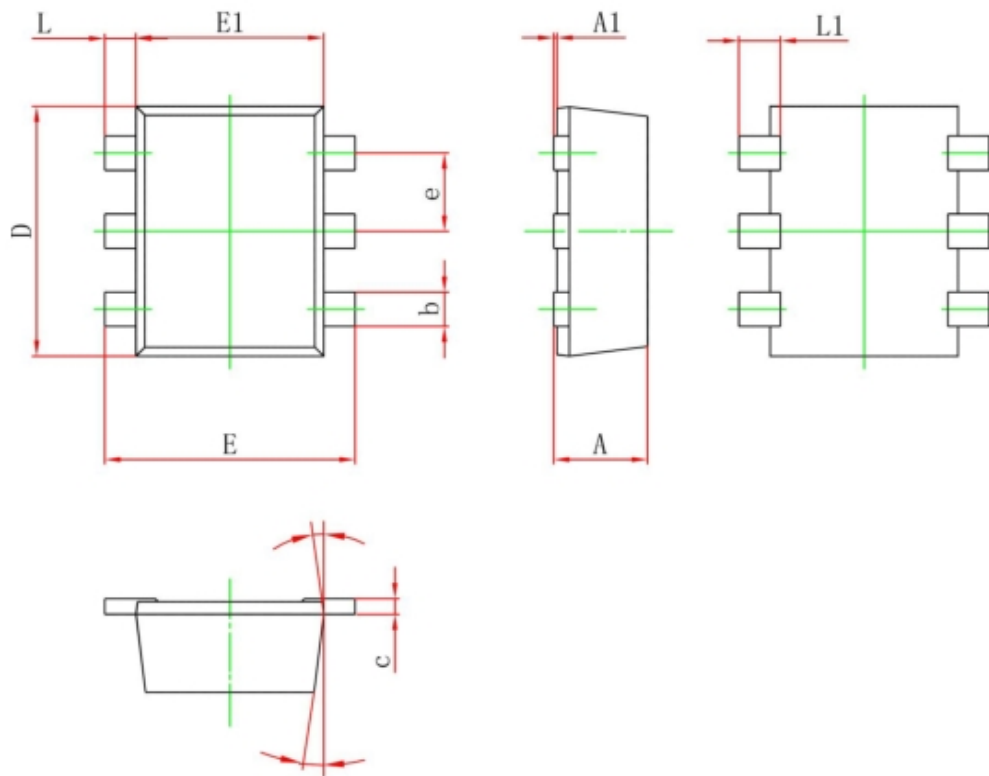
(T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	60			V
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	1	1.5	2.5	V
Gate-body leakage current	I _{GSS}	V _{DS} = 0V, V _{GS} =±20V			±10	uA
Zero gate voltage drain current	I _{DSS}	V _{DS} =60V,V _{GS} = 0V			1	uA
Drain-source on-resistance	R _{DS(on)}	V _{GS} =10V, I _D =500mA		1.1	3	Ω
		V _{GS} =4.5V, I _D =200mA		1.4	4	
Dynamic characteristics						
Total Gate Charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =250mA		0.3		nC
Gate-Source Charge	Q _{gs}			0.2		
Gate-Drain Charge	Q _{gd}			0.08		
Input Capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1MHz		30	50	pF
Output Capacitance	C _{oss}			4.2	25	
Reverse Transfer Capacitance	C _{rss}			2.9	5	
Switching Characteristics						
Turn-On Delay Time	t _{d(on)}	V _{DD} =30V,I _D =200mA, V _{GEN} =10V, R _G =25Ω		3.9		ns
Turn-On Rise Time	t _R			3.4		
Turn-Off Delay Time	t _{d(off)}			15.7		
Turn-Off Fall Time	t _F			9.9		
Source-Drain Diode Characteristics						
Diode Forward voltage	V _{SD}	V _{GS} =0V, I _S =200mA		0.82	1.3	V

Typical Characteristics



SOT-563 Package Information



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.525	0.600
A1	0.000	0.050
e	0.450	0.550
c	0.090	0.160
D	1.500	1.700
b	0.170	0.270
E1	1.100	1.300
E	1.500	1.700
L	0.100	0.300
L1	0.200	0.400
θ	7°Ref.	