

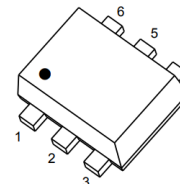
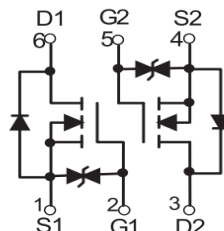
Plastic-Encapsulate MOSFETS

FEATURE

- High density cell design for Low $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

APPLICATION

- Load Switch for Portable Devices
- DC/DC Converter



SOT563

MARKING : KAS

N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60 V	5Ω @10V	340mA
	5.3Ω @4.5V	

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

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	340	mA
I_{DM}	Pulsed Drain Current(note1)	800	mA
P_D	Power Dissipation	0.2	W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C/W

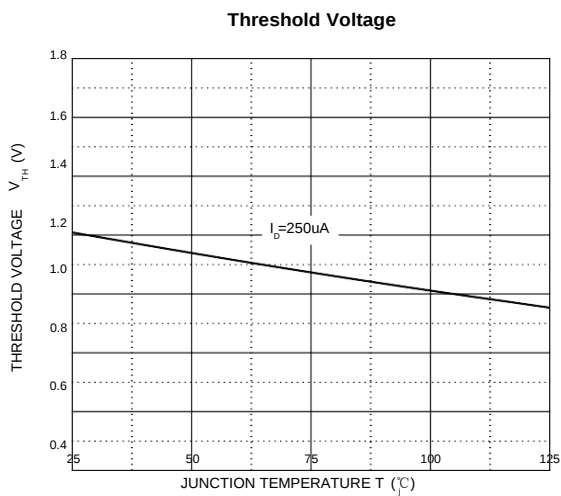
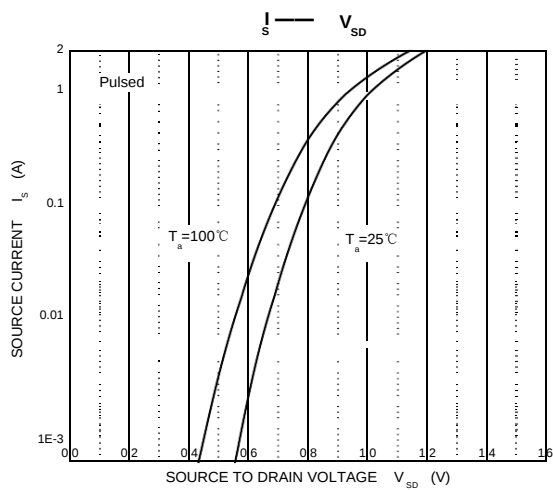
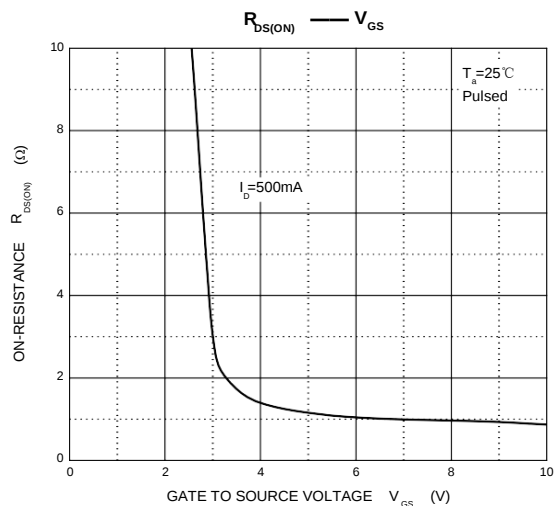
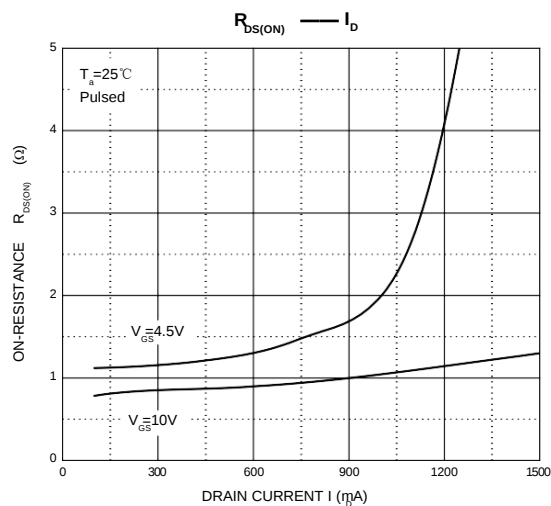
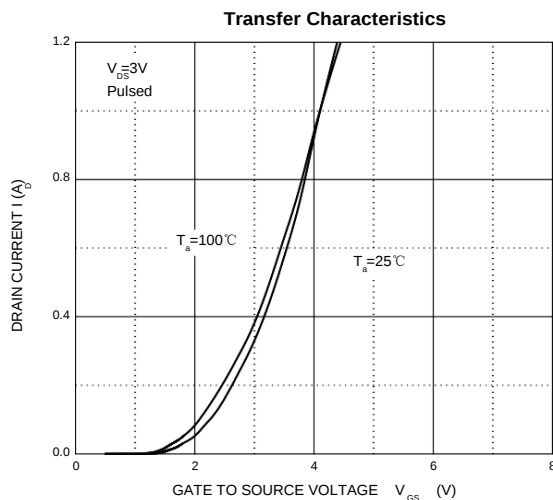
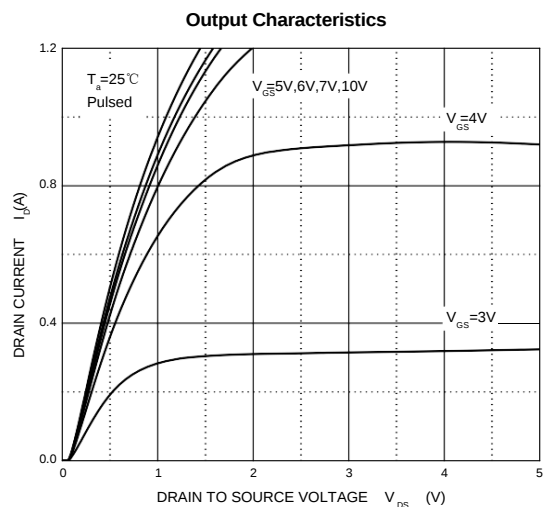
T_a=25 C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source Breakdown Voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D =250μA	60			V
GateThreshold Voltage (note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =1mA	1	1.3	2.5	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =48V,V _{GS} = 0V			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V			±10	μA
Drain-Source On-Resistance (note 2)	R _{DS(on)}	V _{GS} =4.5V, I _D =200mA		2.3	5.3	R
		V _{GS} =10V, I _D =500mA		1.5	5	R
DYNAMIC PARAMETERS (note 3)						
Input Capacitance	C _{iSS}	V _{DS} =10V,V _{GS} =0V,f =1MHz			40	pF
Output Capacitance	C _{oSS}				30	pF
Reverse Transfer Capacitance	C _{rSS}				10	pF
SWITCHING PARAMETERS(note 3)						
Turn-on Delay Time	t _{d(on)}	V _{GS} =10V,V _{DD} =50V, R _G =50Ω R _{GS} =50Ω, R _L =250Ω			10	ns
Turn-off Delay Time	t _{d(off)}				15	ns
Reverse Recovery Time	t _{rr}	V _{GS} =0V,I _S =300mA,V _R =25V, dI _S /dt=-100A/us		30		ns
Recovered Charge	Q _r	V _{GS} =0V,I _S =300mA,V _R =25V dI _S /dt=-100A/us		30		nC
DRAIN-SOURCE DIODE						
Diode Forward Voltage(note 2)	V _{SD}	I _S =300mA, V _{GS} = 0V			1.5	V
Continuous Diode Forward Current	I _S				0.2	A
Pulsed Diode Forward Current(note1)	I _{SM}				0.53	A

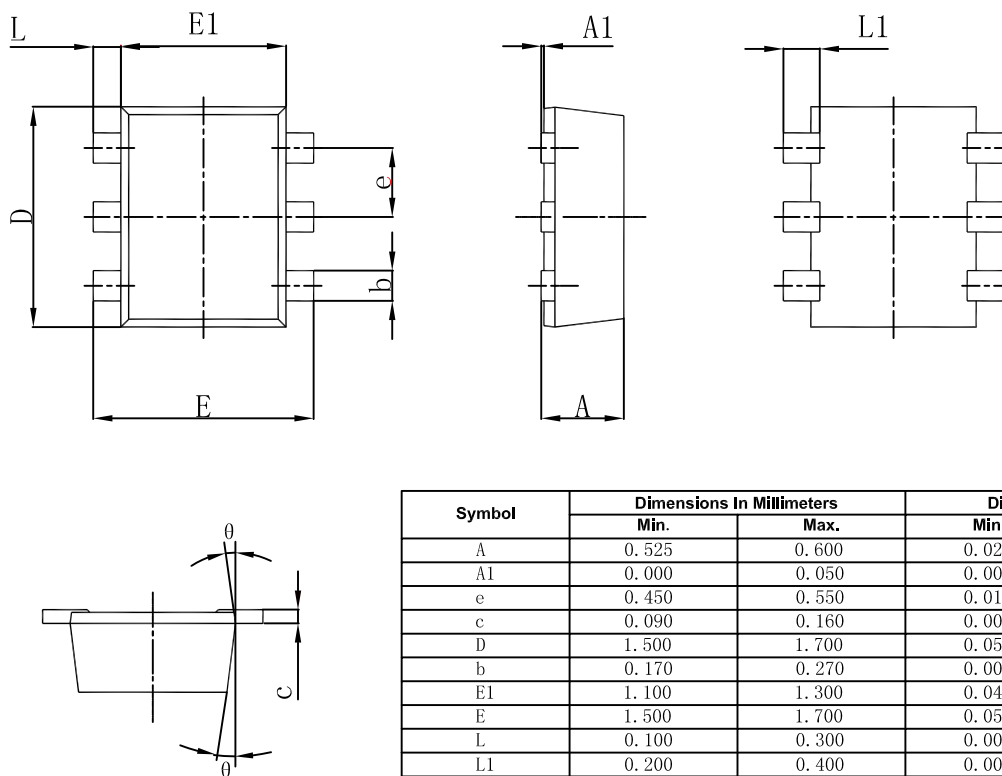
Notes :

1. Repetitive rating + Pluse width limited by junction temperature.
2. Pulse Test : Pulse width≤300μs, duty cycle” 2%.
3. Guaranteed by design, not subject to production testing.

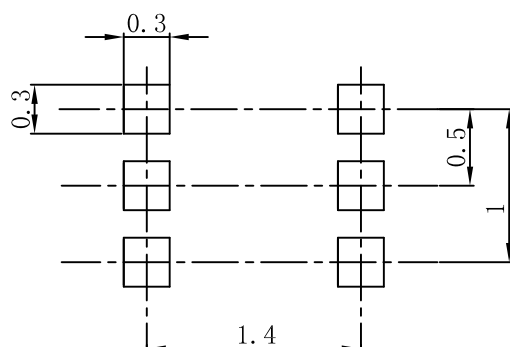
Typical Characteristics



SOT-563 Package Outline Dimensions



SOT-563 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.