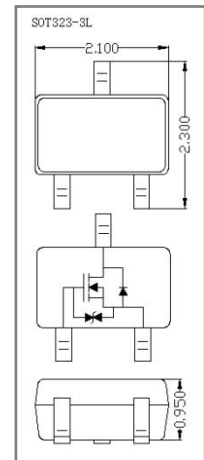
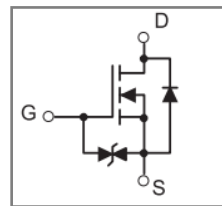


N-Channel MOSFET
FEATURES

Epoxy meets UL 94 V-0 flammability rating
 High density cell design for low $R_{DS(ON)}$
 Voltage controlled small signal switch
 Rugged and reliable
 ESD protected

Equivalent Circuit


MAXIMUM RATINGS (Ta = 25 °C)

Symbol	Parameter	Value	Units
V_{DS}	Drain-source Voltage	60	V
V_{GS}	Gate-source Voltage	± 20	V
I_D	Continuous Drain Current	340	mA
P_d	Total Power Dissipation	200	mW
T_J	Junction Temperature	150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to 150	$^{\circ}C$
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	60			V
$V_{GS(th)}$	Gate-Threshold Voltage (note 1)	$V_{DS}=V_{GS}, I_D=1mA$	1.0		2.5	V
I_{GSS}	Gate-body Leakage Current	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=48V, V_{GS}=0V$			1	μA
$R_{DS(ON)}$	Drain-source On-resistance (note 1)	$V_{GS}=4.5V, I_D=200mA$ $V_{GS}=10V, I_D=500mA$			5.3 5.0	Ω
V_{SD}	Diode Forward Voltage	$V_{GS}=0V, I_S=300mA$			1.5	V

N-Channel MOSFET
Dynamic Characteristics

Ciss	Input Capacitance	V _{DS} =10V V _{GS} =0V f=1MHz			40	pF
Coss	Output Capacitance				30	
Crss	Reverse Transfer Capacitance				10	

Switching Characteristics

t _{d(on)}	Turn-on delay time	V _{DD} =50V, V _{GS} =10V, R _L =250 Ω , R _{GS} =50 Ω , R _{GEN} =50 Ω			10	ns
t _{d(off)}	Turn-off delay time				15	
t _{rr}	Reverse Recovery Time	V _{GS} =0V, I _S =300mA, V _R =25V, dI _S /dt=-100A/us		30		ns
Q _r	Recovered Charge	V _{GS} =0V, I _S =300mA, V _R =25V dI _S /dt=-100A/us		30		nC

GATE-SOURCE ZENER DIODE

BV _{GSO}	Gate-Source Breakdown Voltage	I _{GS} =±1mA(Open Drain)	±21.5		±30	V
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DRAIN-SOURCE DIODE

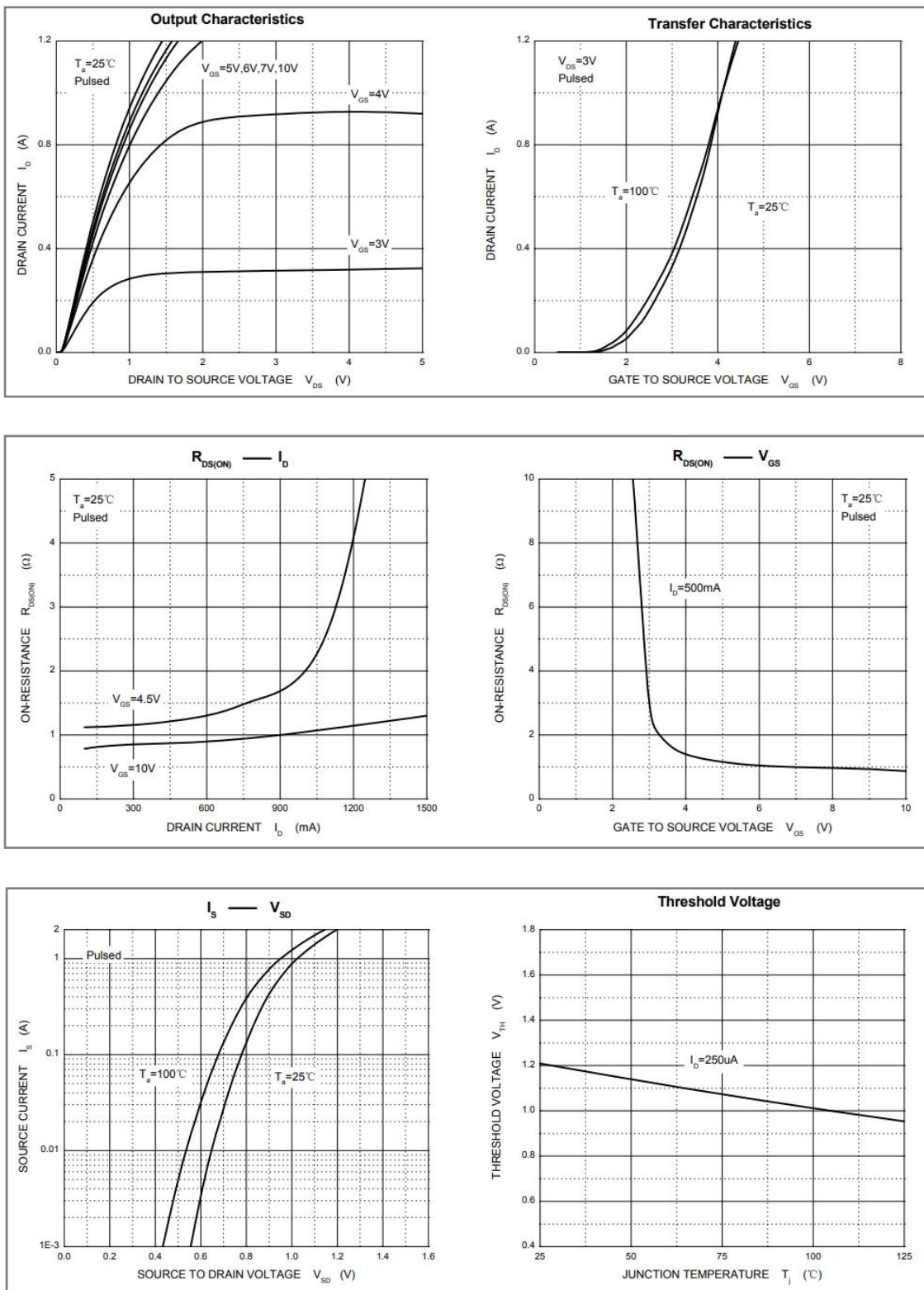
V _{SD}	Diode Forward Voltage(note 1)	I _S =300mA, V _{GS} = 0V			1.5	V
I _S	Continuous Diode Forward Current				0.2	A
I _{SM}	Pulsed Diode Forward Current				0.53	A

Note:

1. Pulse Test : Pulse width ≤300μs, duty cycle ≤2%.

N-Channel MOSFET

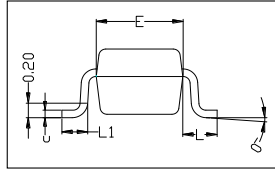
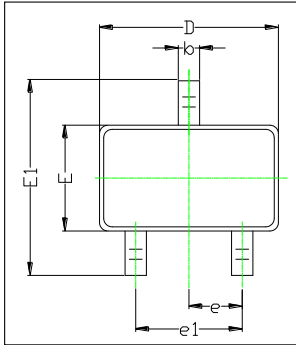
TYPICAL CHARACTERISTICS



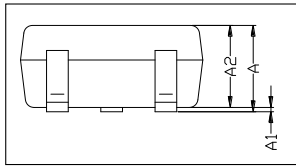
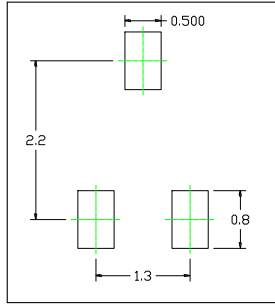
N-Channel MOSFET

PACKAGE DIMENSIONS

Package outline : SOT323



SOLDERING PATTERN



SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.900	1.000
A1	0.00	0.100
A2	0.900	1.000
b	0.200	0.400
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°