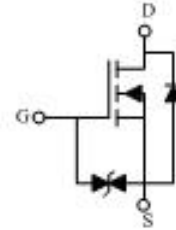


N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
20V	380 mΩ@4.5V	0.75A
	450 mΩ@2.5V	
	800mΩ@1.8V	

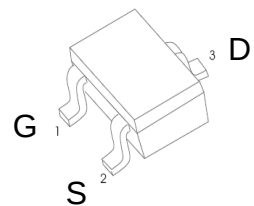


FEATURE

- High-Side Switching
- Low On-Resistance
- Low Threshold
- Fast Switching Speed

APPLICATION

- Drivers:Relays, Solenoids, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers



SOT-323

MARKING : 34K

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

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DSS}	20	V
Typical Gate-Source Voltage	V_{GS}	±12	
Drain Current-Continuous	I_D	0.75	A
Drain Current -Pulsed(Note1)	I_{DM}	3	
Power Dissipation (Note 2)	P_D	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Storage Temperature	T_j	150	$^{\circ}\text{C}$
Junction Temperature	T_{stg}	-55 ~+150	

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at $T_a=25^{\circ}\text{C}$.

N-Channel MOSFET
T_a=25 °C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off States						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Gate-Threshold Voltage(note 1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35		1.1	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±10V			±20	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Drain-Source On-State Resistance(note 1)	R _{DS(on)}	V _{GS} =4.5V, I _D =650mA			380	mΩ
		V _{GS} =2.5V, I _D =550mA			450	
		V _{GS} =1.8V, I _D =450mA			800	
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =800mA	1			S
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =16V,V _{GS} =0V,f =1MHz			120	pF
Output Capacitance	C _{oss}				20	
Reverse Transfer Capacitance	C _{rss}				15	
Switching Times						
Turn-On Delay Time	t _{d(on)}	V _{DD} =10V,I _D =500mA, V _{GS} =4.5V,R _G =10Ω		6.7		ns
Rise Time	t _r			4.8		
Turn-Off Delay Time	t _{d(off)}			17.3		
Fall Time	t _f			7.4		
Drain-Source Diode Characteristics						
Drain-Source Diode Forward Voltage (note 1)	V _{SD}	I _S =0.15A, V _{GS} = 0V			1.2	V

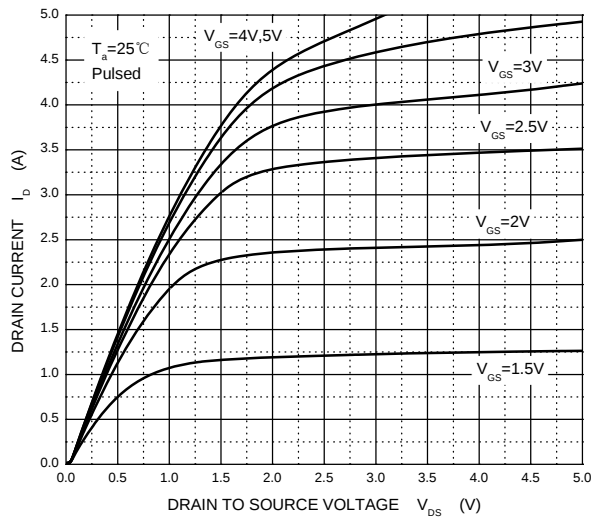
Notes:

1. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.

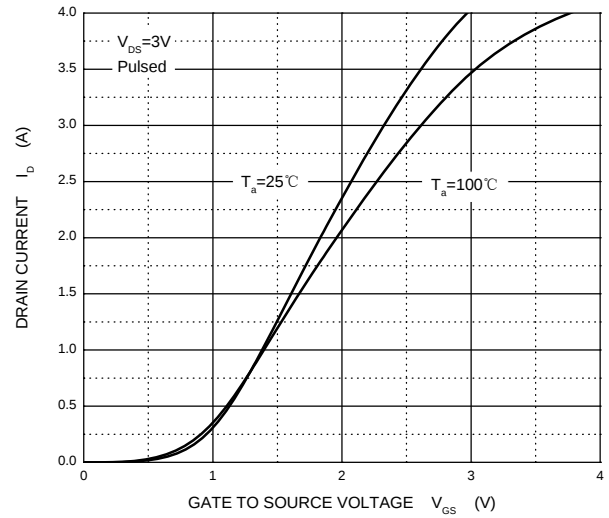
N-Channel MOSFET

Typical Characteristics

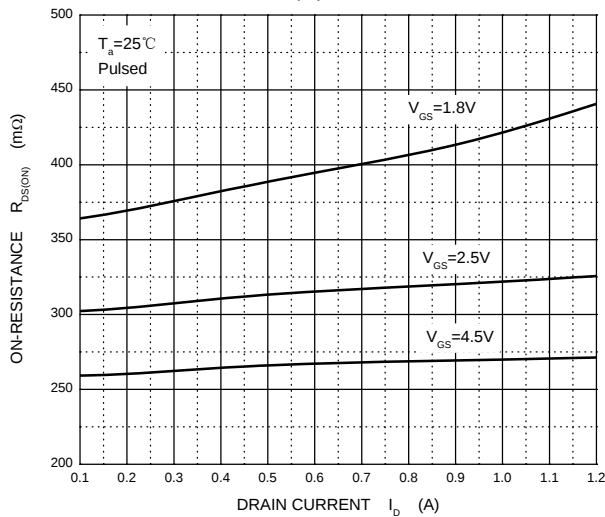
Output Characteristics



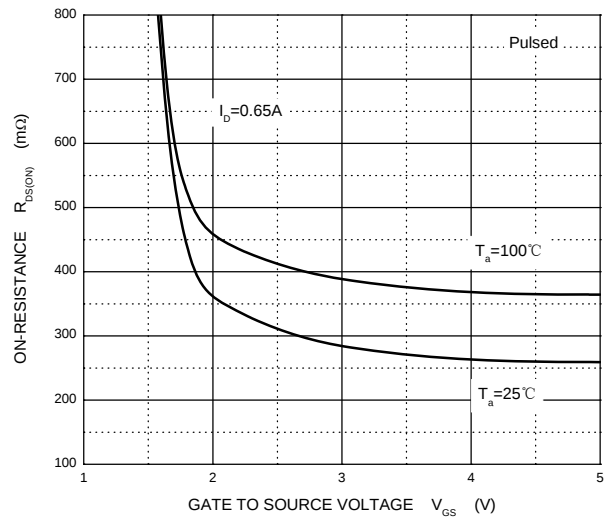
Transfer Characteristics



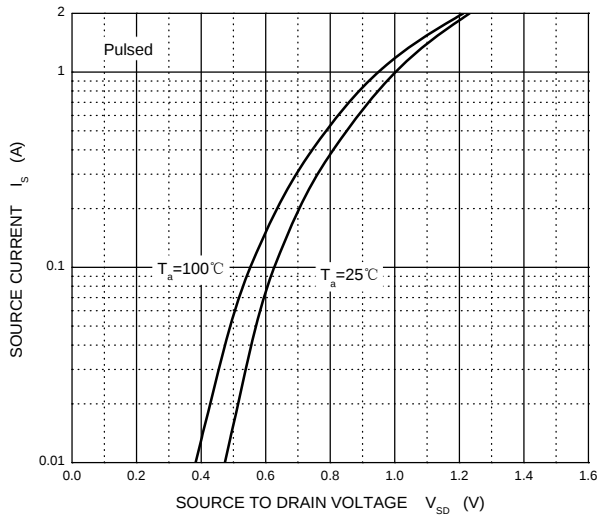
$R_{DS(ON)}$ — I_D



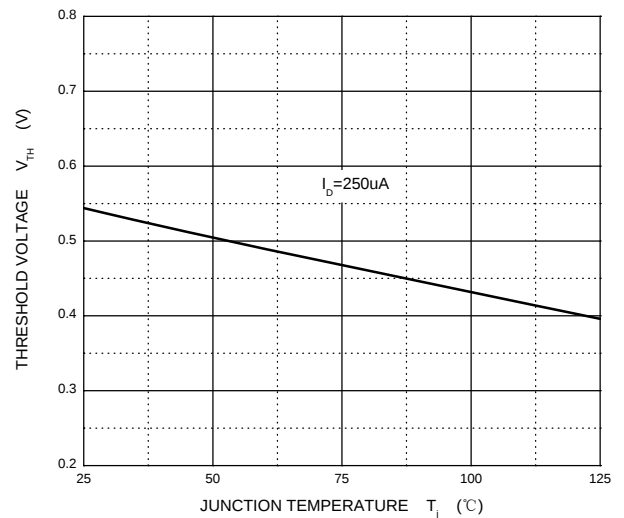
$R_{DS(ON)}$ — V_{GS}

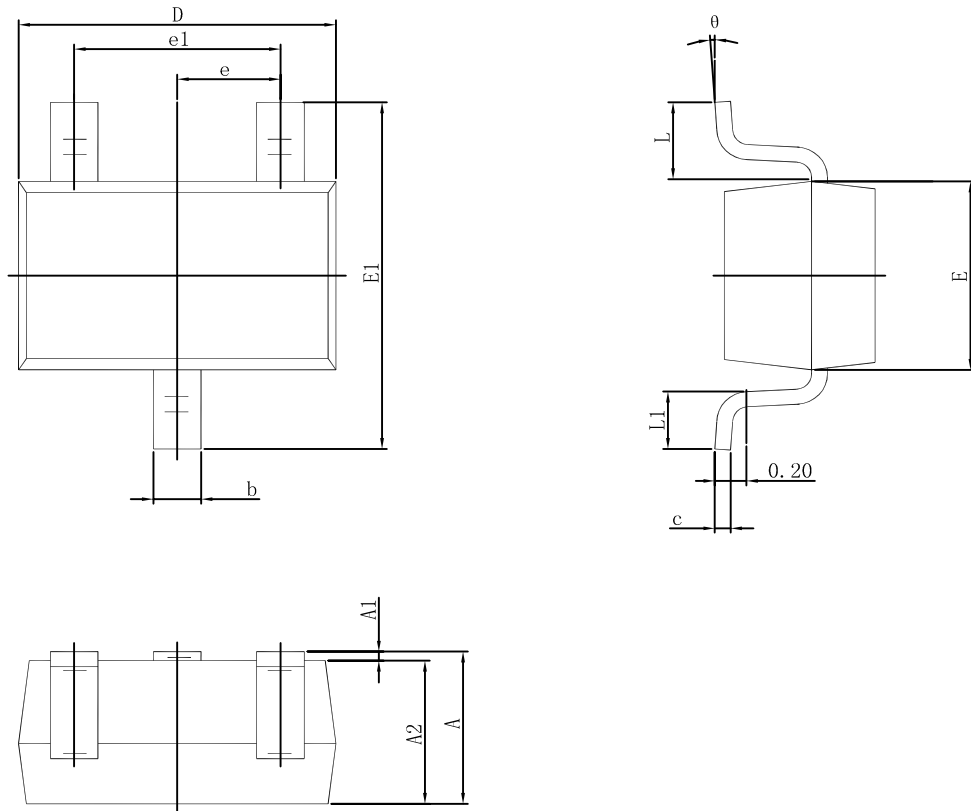


I_S — V_{SD}



Threshold Voltage



N-Channel MOSFET
SOT-323 PACKAGE OUTLINE DIMENSIONS


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°