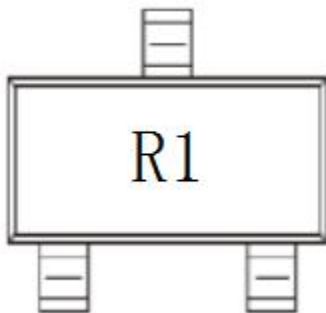# JST3401

-30V,-4.2A
P-Channel Mosfet

FEATURES

RDS(ON)≤ 63mΩ @VGS=-10V

RDS(ON)≤ 67mΩ @VGS=-4.5V

RDS(ON)≤ 85mΩ @VGS=-2.5V
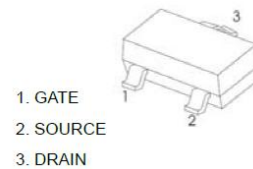
APPLICATIONS

Load/Power Switching

Interfacing Switching

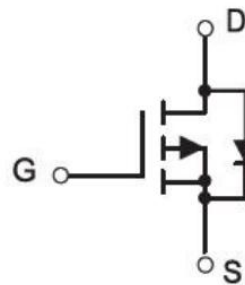**SOT-23**

1. GATE
2. SOURCE
3. DRAIN

MARKING

P-CHANNEL MOSFET

Maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±12	
Continuous Drain Current	I_D	-4.2	A
Pulsed Drain Current	I_{DM}	-12	
Maximum Power Dissipation	P_D	0.4	W
Thermal Resistance from Junction to Ambient(t ≤5s)	$R_{\theta JA}$	313	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS T_a=25 ℃ unless otherwise specified

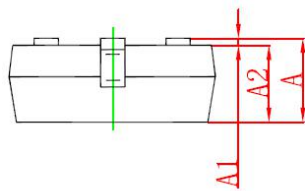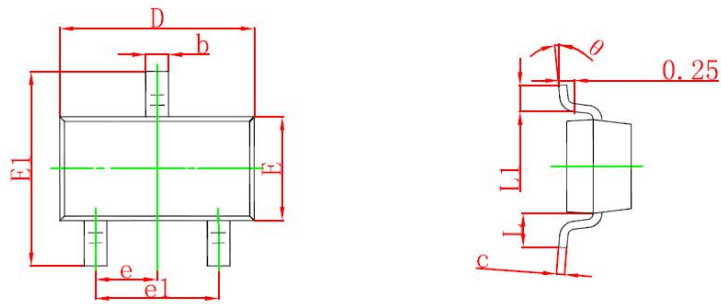| Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-30	-35		V
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.5	-0.9	-1.5	
Gate-source leakage	I_{GSS}	V_{DS} =0V, V_{GS} =±12V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} =-30V, V_{GS} =0V			-1	μA
Drain-source on-state resistance [a]	$R_{DS(on)}$	V_{GS} =-10V, I_D =-4.2A		45	63	mΩ
		V_{GS} =-4.5V, I_D =-4A		49	67	
		V_{GS} =-2.5V, I_D =-1A		60	85	
Body diode voltage	V_{SD}	I_S=-0.7A		-0.7	-1	V
Dynamic[b]						
Input capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		1050		pF
Output capacitance	C_{oss}			127		
Reverse transfer capacitance	C_{rss}			85		
Total gate charge	Q_g	V_{DS}=-15V,V_{GS}=-4.5V ID=-4A		9.5		nC
Gate-source charge	Q_{gs}			2		
Gate-drain charge	Q_{gd}			3		
Turn-on delay time	$t_{d(on)}$	V_{DS}=-15V, R_L=3.6Ω, V_{GS}=-10V,R_{GEN}=6Ω			6.5	nS
Rise time	t_r				3.5	
Turn-off delay time	$t_{d(off)}$				40	
Fall time	t_f				13	

Notes :

a. Pulse Test : Pulse Width < 300μs, Duty Cycle ≤2%.

b. Guaranteed by design, not subject to production testing.

P-Channel -30V (D-S) MOSFET Typical Characteristics

Output Characteristics

Transfer Characteristics

$R_{DS(ON)}$ —— I_D

$R_{DS(ON)}$ —— V_{GS}

I_S —— V_{SD}

Threshold Voltage
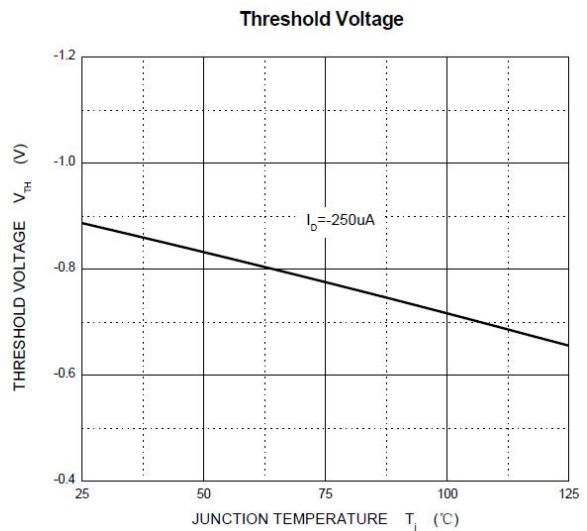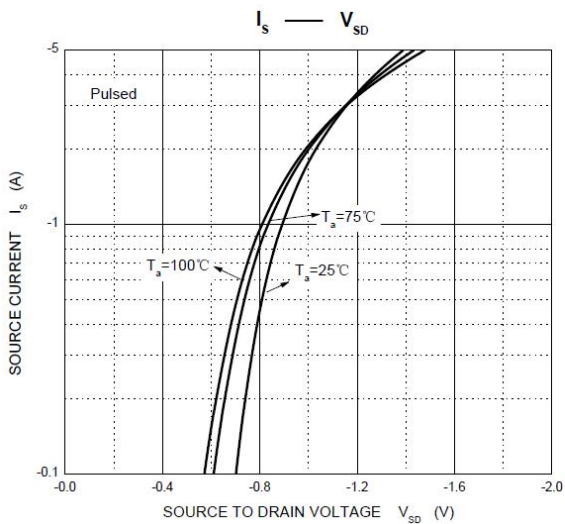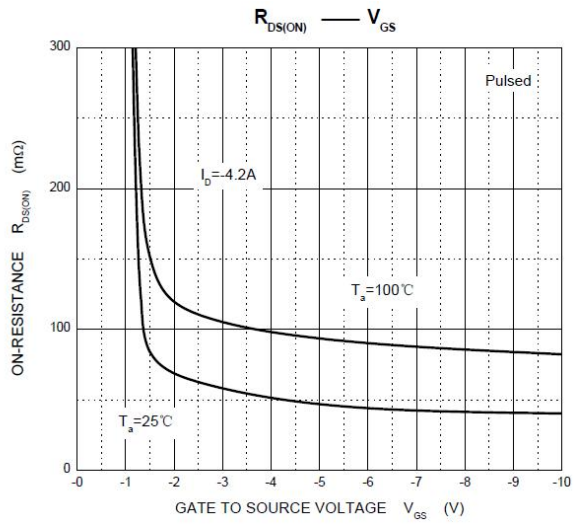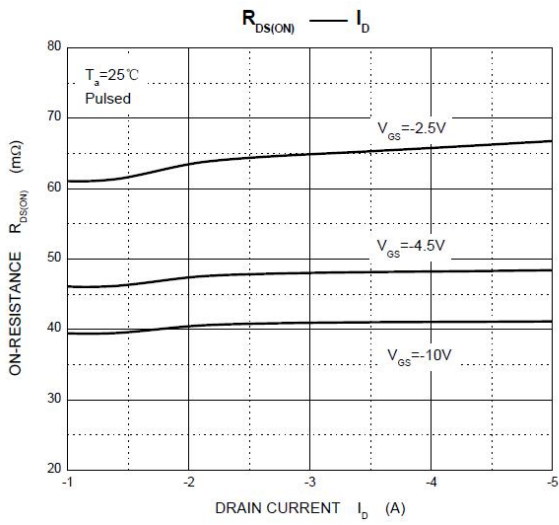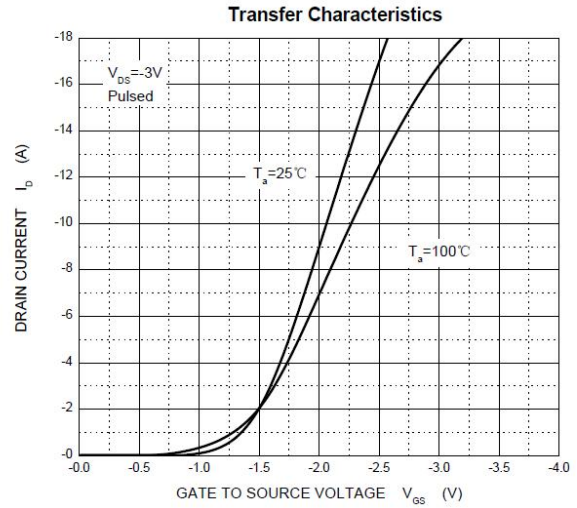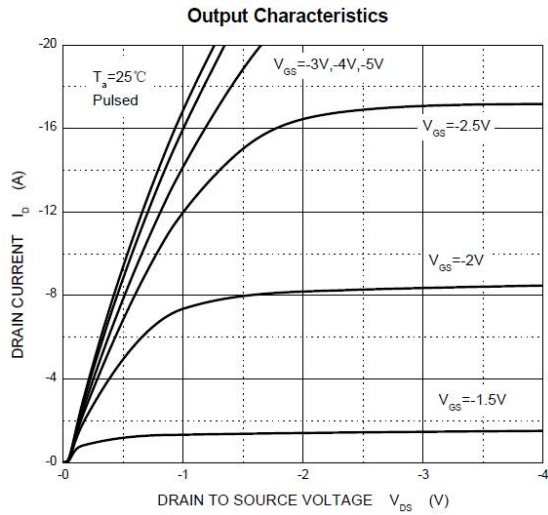
SOT-23 package

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout
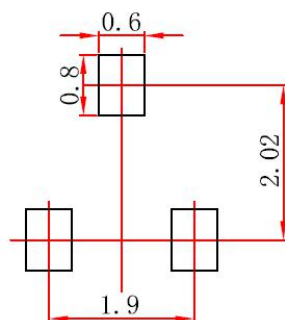
Note:
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

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