



### Features

- High dense cell design for extremely low  $R_{DS(ON)}$ .
- Exceptional on-resistance and maximum DC current capability

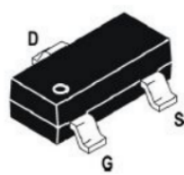
### Product Summary

$V_{DS}$	$R_{DS(ON)}$ @-4.5V (Max)	$R_{DS(ON)}$ @-2.5V(Max)	$R_{DS(ON)}$ @-10V (Max)	$I_D$
-30V	75m $\Omega$	100m $\Omega$	65m $\Omega$	-4.2A

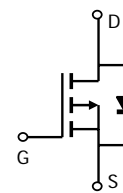
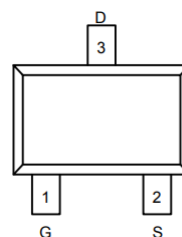
### Application

- PWM applications
- Load switch
- Power management

top view



SOT23



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

Parameter Symbol		Value	Unit
Drain-Source Voltage	$V_{DS}$	-30	V
Gate-Source Voltage	$V_{GS}$	$\pm 12$	V
Continuous Drain Current	$I_D$	-4.2	A
Power Dissipation	$P_D$	350	mW
Thermal Resistance from Junction to Ambient ( $t < 5s$ )	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55~+150	$^{\circ}\text{C}$

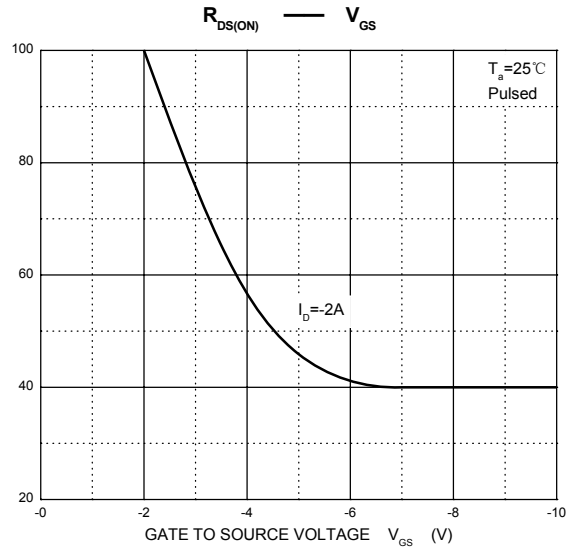
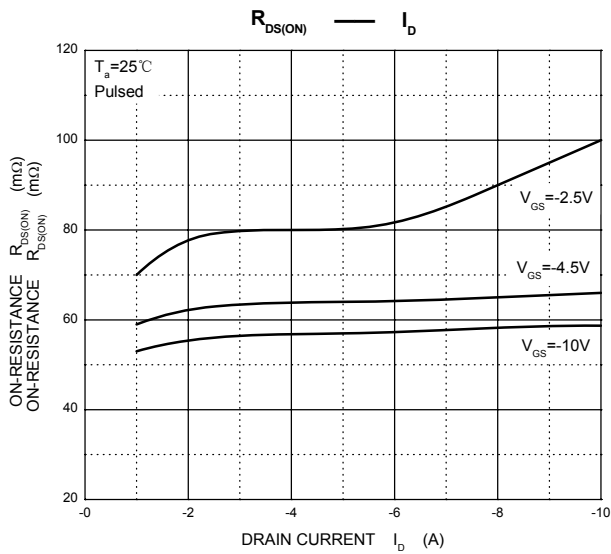
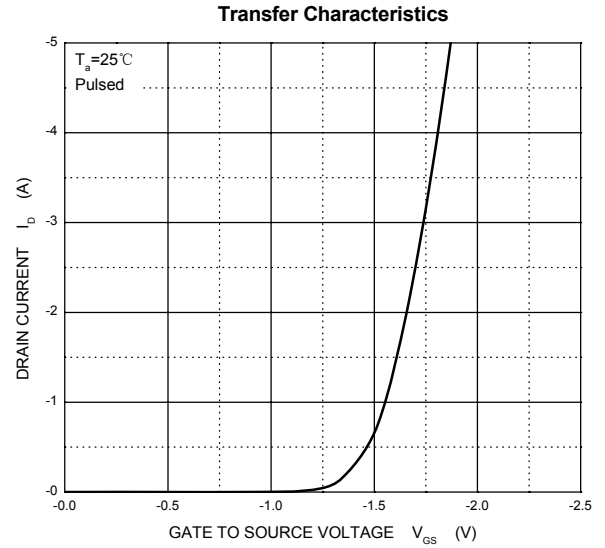
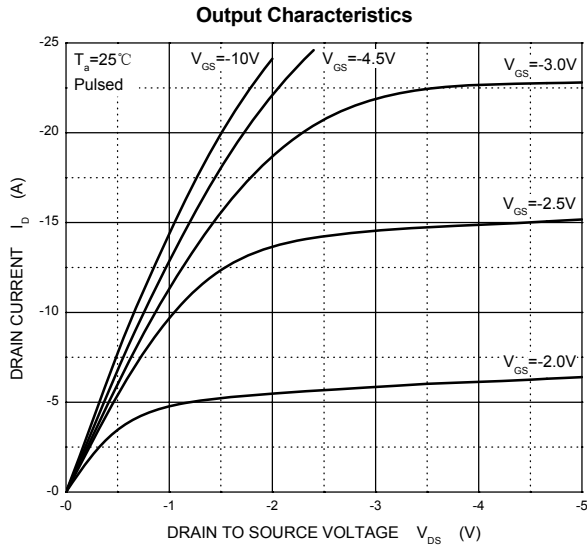
### Electrical characteristics (T<sub>a</sub>=25°C unless otherwise noted)

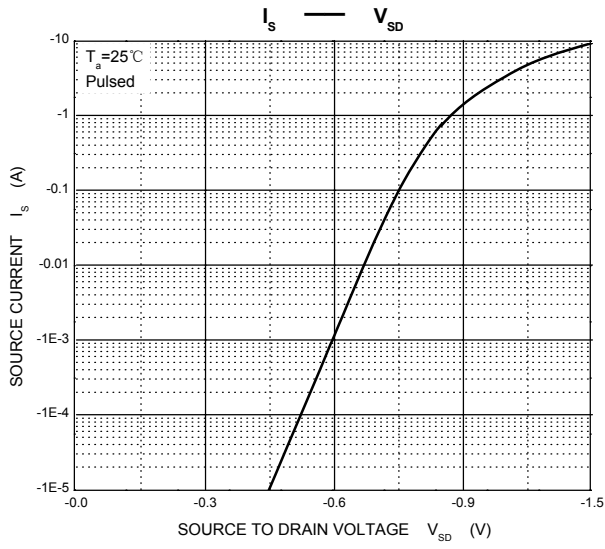
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>Off characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	-30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = -24V, V <sub>GS</sub> = 0V			-1	μA
Gate-source leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±12V, V <sub>DS</sub> = 0V			±100	nA
<b>On characteristics</b>						
Drain-source on-resistance (note 1)	R <sub>DS(on)</sub>	V <sub>GS</sub> = -10V, I <sub>D</sub> = -4A			65	mΩ
		V <sub>GS</sub> = -4.5V, I <sub>D</sub> = -3A			75	mΩ
		V <sub>GS</sub> = -2.5V, I <sub>D</sub> = -1A			100	mΩ
Forward tranconductance (note 1)	g <sub>FS</sub>	V <sub>DS</sub> = -5V, I <sub>D</sub> = -5A	7			S
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	-0.5		-1.5	V
<b>Dynamic characteristics (note 2)</b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> = -15V, V <sub>GS</sub> = 0V, f = 1MHz		954		pF
Output capacitance	C <sub>oss</sub>			115		pF
Reverse transfer capacitance	C <sub>rss</sub>			77		pF
<b>Switching characteristics (note 2)</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> = -10V, V <sub>DS</sub> = -15V, R <sub>L</sub> = 3.6Ω, R <sub>GEN</sub> = 6Ω			6.3	ns
Turn-on rise time	t <sub>r</sub>				3.2	ns
Turn-off delay time	t <sub>d(off)</sub>				38.2	ns
Turn-off fall Time	t <sub>f</sub>				12	ns
<b>Drain-source diode characteristics and maximum ratings</b>						
Diode forward voltage (note 1)	V <sub>SD</sub>	I <sub>S</sub> = -1A, V <sub>GS</sub> = 0V			-1	V

**Note :**

1. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 2%.
2. These parameters have no way to verify.

# Typical Characteristics



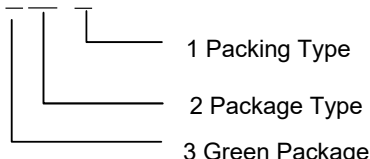


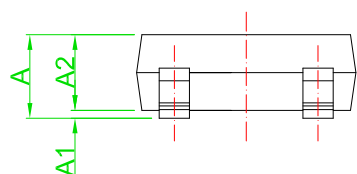
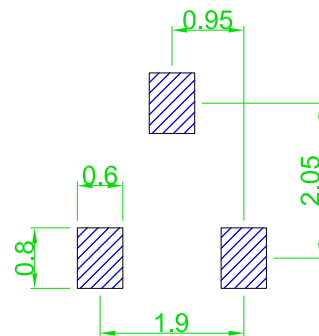
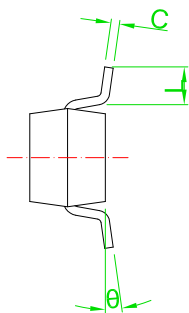
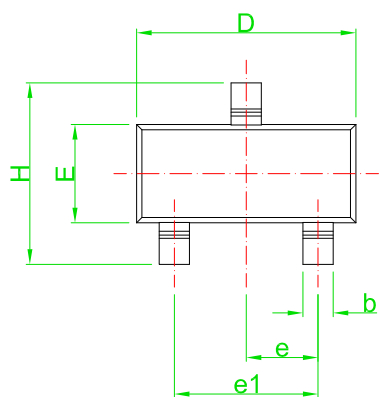
### Ordering and Marking Information

Device	Marking	Package	Packaging	Quantity
ASDM3401ZA	3401	SOT23	Tape&Reel	3000/Reel

PACKAGE	MARKING
SOT23	<div style="border: 1px solid black; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center;"> <p><b>3401</b></p> </div>

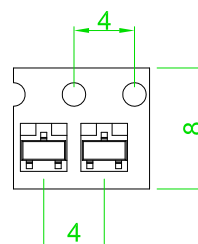
Ordering Number		Package
Lead Free	Halogen Free	
ASDM3401-ZA-R	ASDM3401G-ZA-R	SOT23

<p>ASDM3401G-ZA- R</p>  <ul style="list-style-type: none"> <li>1 Packing Type</li> <li>2 Package Type</li> <li>3 Green Package</li> </ul>	<ul style="list-style-type: none"> <li>1 T:Tube,R:Tape Reel</li> <li>2 ZA: SOT23</li> <li>3 blank : Lead Free</li> <li style="padding-left: 20px;">G:Halogen Free</li> </ul>
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Recommended Land Pattern

Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.55	0.012	0.022
C	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
e	0.95 TYP		0.037 TYP	
e1	1.80	2.00	0.071	0.079
H	2.25	2.55	0.089	0.100
L	0.30	0.50	0.012	0.020
θ	0°	8°	0°	8°



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