

# ATM3400ANSA

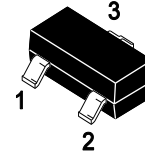
## N-Channel Enhancement Mode Field Effect Transistor

Drain-Source Voltage: 30V Drain Current: 5.8A

### FEATURES

- ◆ Trench FET Power MOSFET
- ◆  $R_{DS(ON)} < 35m\Omega$  ( $V_{GS} = 10V$ )
- ◆  $R_{DS(ON)} < 40m\Omega$  ( $V_{GS} = 4.5V$ )
- ◆  $R_{DS(ON)} < 52m\Omega$  ( $V_{GS} = 2.5V$ )

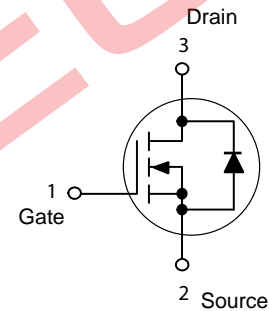
SOT-23



### APPLICATIONS

- ◆ DC/DC Converter
- ◆ Battery Switch

Schematic diagram



### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ C$ 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	$I_D$	5.8	A
Pulsed Drain Current <sup>1</sup>	$I_{DM}$	30	A
Power Dissipation	$P_D$	0.35	W
Thermal Resistance from Junction to Ambient <sup>2</sup>	$R_{\theta JA}$	357	$^\circ C/W$
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{STG}$	-55~ +150	$^\circ C$

# ATM3400ANSA

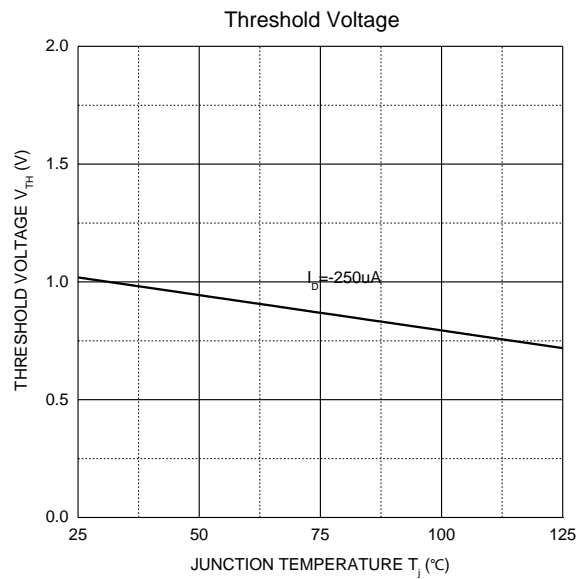
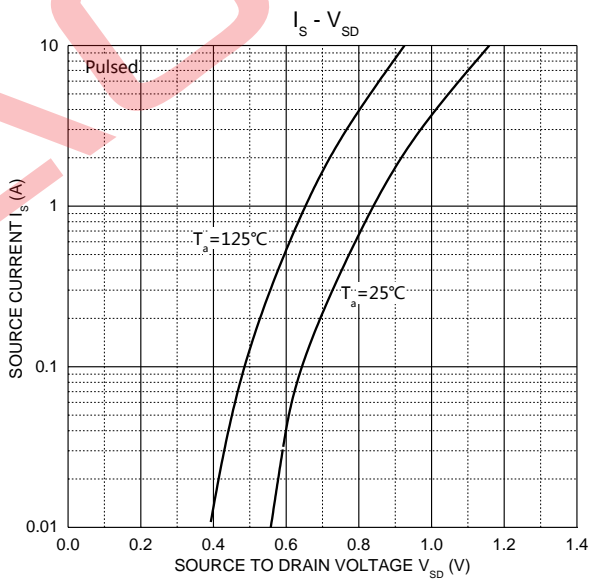
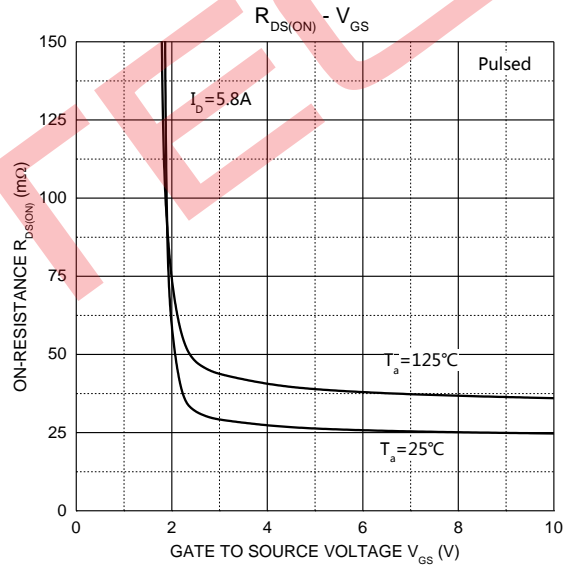
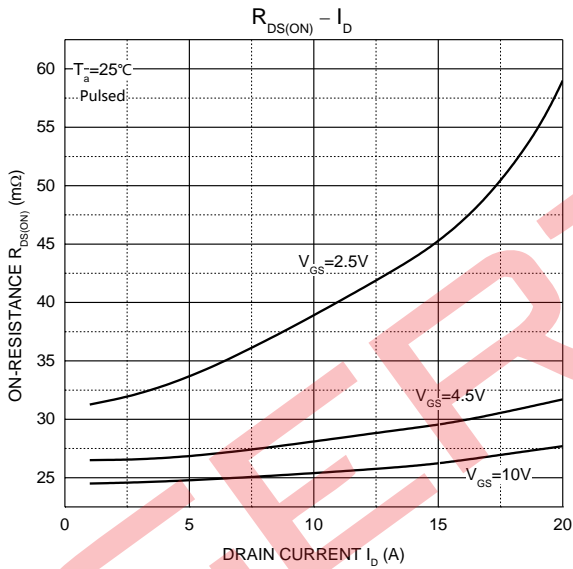
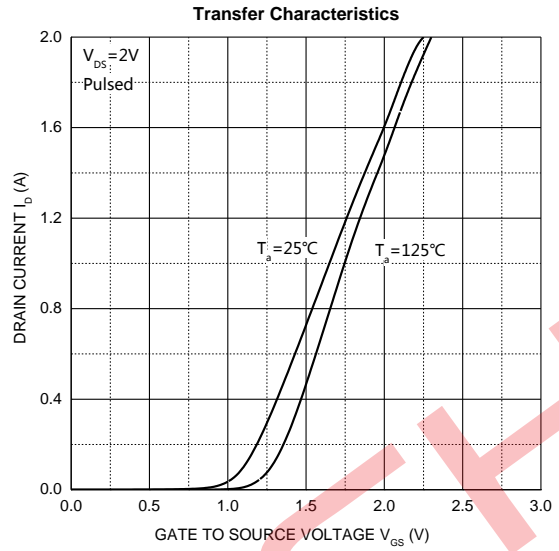
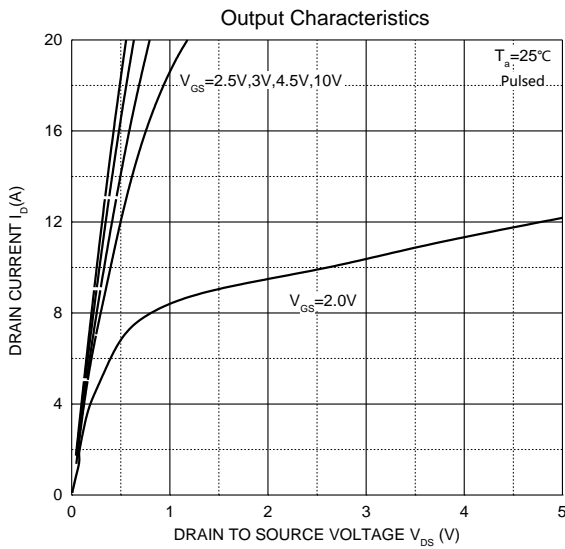
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static 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-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> =±12V, V <sub>DS</sub> = 0V			±0.1	μA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	0.7		1.4	V
Drain-source on-resistance <sup>3</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =5.8A		27	35	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =5A		29	40	
		V <sub>GS</sub> =2.5V, I <sub>D</sub> =4A		38	52	
Forward tranconductance	g <sub>FS</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =5A	8			S
<b>Dynamic characteristics<sup>4</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, f =1MHz			1050	pF
Output Capacitance	C <sub>oss</sub>			99		
Reverse Transfer Capacitance	C <sub>rss</sub>			77		
Gate resistance	R <sub>g</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =0V, f =1MHz			3.6	Ω
<b>Switching Characteristics<sup>4</sup></b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =15V, R <sub>L</sub> =2.7Ω, R <sub>GEN</sub> =3Ω			5	ns
Turn-on rise time	t <sub>r</sub>				7	
Turn-off delay time	t <sub>d(off)</sub>				40	
Turn-off fall time	t <sub>f</sub>				6	
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage <sup>3</sup>	V <sub>DS</sub>	V <sub>GS</sub> =0V, I <sub>S</sub> =1A			1	V

### Notes :

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

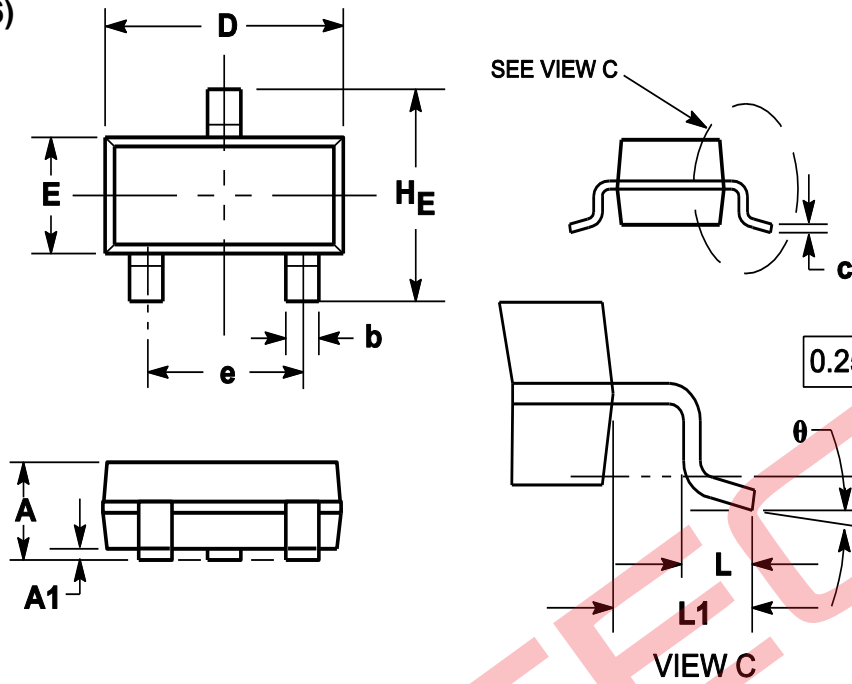
## TYPICAL CHARACTERISTICS CURVES



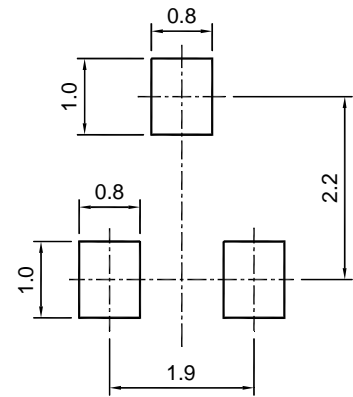
# ATM3400ANSA

## PACKAGE OUTLINE

### SOT-23 (TO-236)



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
HE	2.250	2.400	2.550
e	1.800	1.900	2.000
L1	0.550REF		
L	0.300		0.500
$\theta$	0°		8°



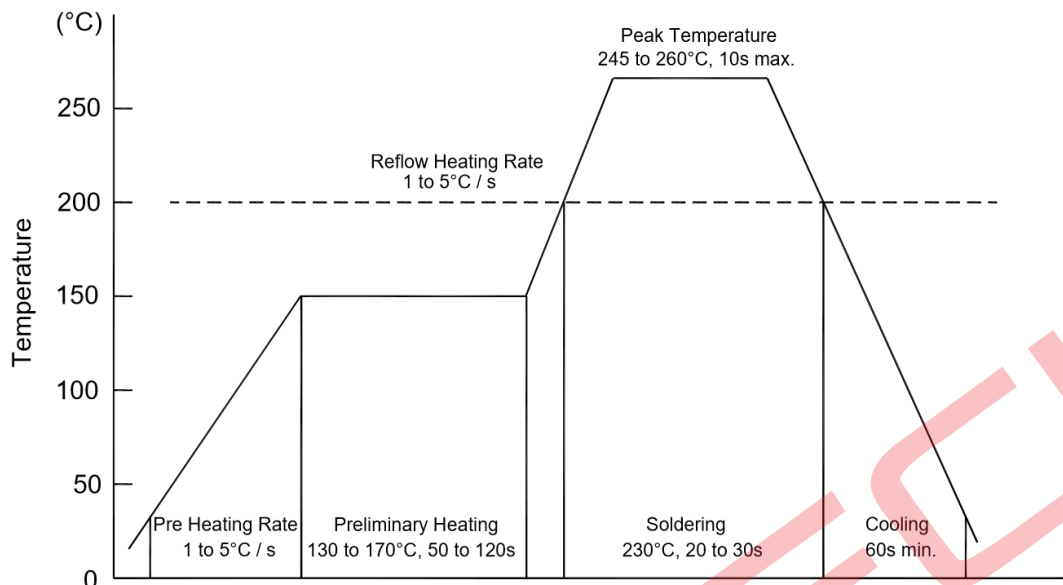
SOT-23 (TO-236)

**Recommended soldering pad**

### ORDERING INFORMATION

Device	Package	Shipping
ATM3400ANSA	SOT-23	3000/Reel&Tape(7inch)

### ◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

### ◆ Conditions of hand soldering

- Temperature: 370 °C
- Time: 3s max.
- Times: one time

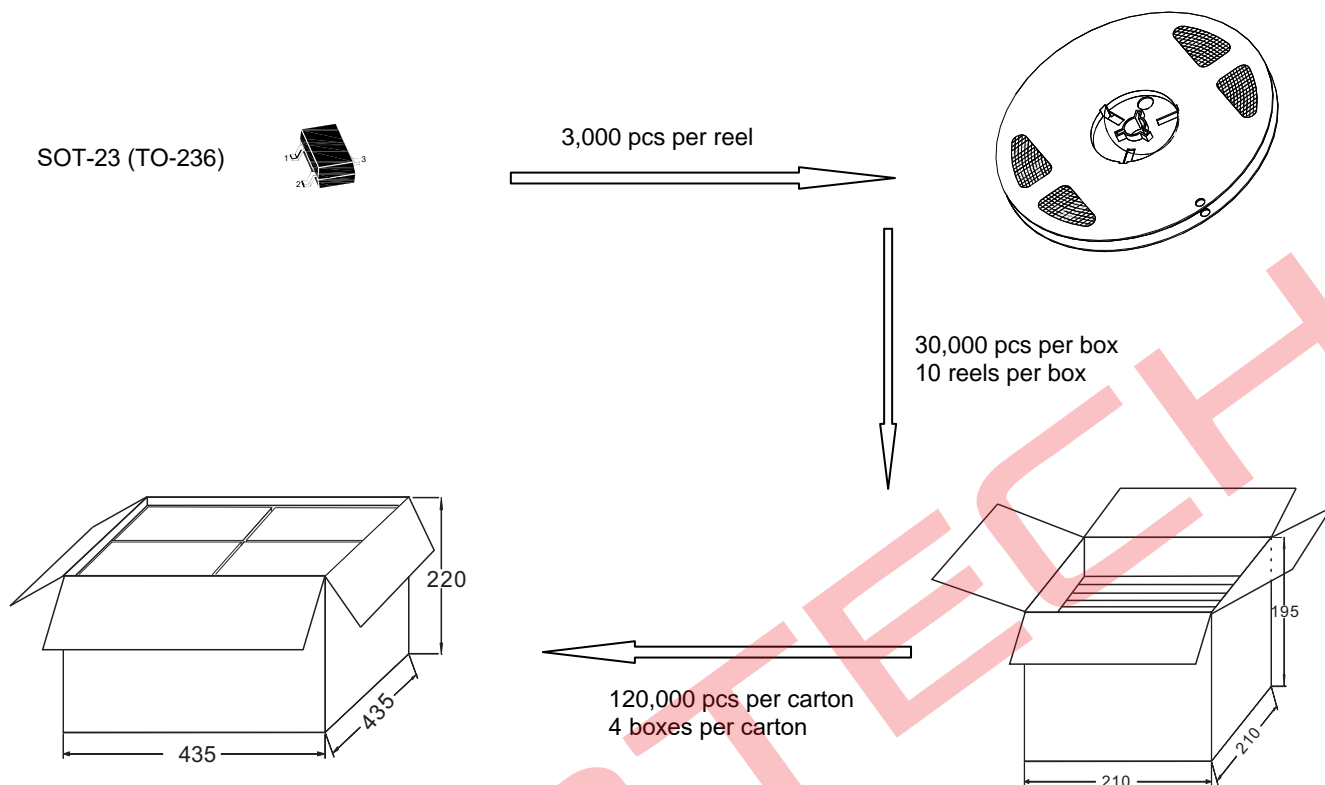
### ◆ Storage conditions

- **Temperature**  
5 to 40 °C
- **Humidity**  
30 to 80% RH
- **Recommended period**  
One year after manufacturing

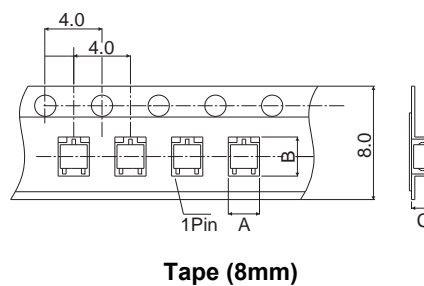
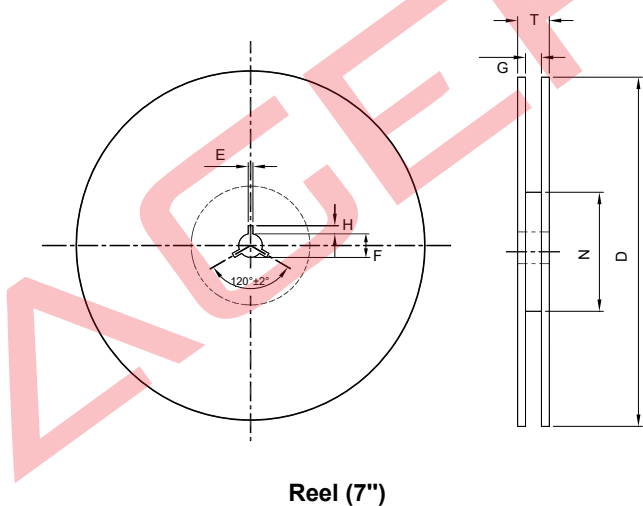
# ATM3400ANSA

## PACKAGE SPECIFICATIONS

### ◆ The method of packaging



### ◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	3.15 ± 0.1
B	2.7 ± 0.1
C	1.25 ± 0.1
E	2 ± 0.5
F	13 ± 0.5
D	178 ± 2.0
G	8.4 ± 1.5
H	4 ± 0.5
N	60
T	< 14.9

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [Agertech](#) manufacturer:*

Other Similar products are found below :

[614233C](#) [648584F](#) [NTNS3A92PZT5G](#) [IRFD120](#) [IRFF430](#) [JANTX2N5237](#) [2N7000](#) [2SK2464-TL-E](#) [FCA20N60\\_F109](#) [FDZ595PZ](#) [AOD464](#)  
[2SK2267\(Q\)](#) [2SK2545\(Q,T\)](#) [405094E](#) [423220D](#) [MIC4420CM-TR](#) [VN1206L](#) [614234A](#) [715780A](#) [SSM6J414TU,LF\(T](#) [751625C](#)  
[IPP60R600P6XKSA1](#) [RJK60S5DPK-M0#T0](#) [PSMN4R2-30MLD](#) [TK31J60W5,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#)  
[EFC2J004NUZTDG](#) [FCAB21350L1](#) [P85W28HP2F-7071](#) [DMN1053UCP4-7](#) [NTE2384](#) [NTE2969](#) [NTE6400A](#) [DMN61D9UWQ-13](#)  
[US6M2GTR](#) [DMN31D5UDJ-7](#) [SSM6P54TU,LF](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#)  
[STF5N65M6](#) [STU5N65M6](#) [C3M0021120D](#) [DMN13M9UCA6-7](#) [BSS340NWH6327XTSA1](#) [MCM3400A-TP](#) [DMTH10H4M6SPS-13](#)  
[IRF40SC240ARMA1](#)