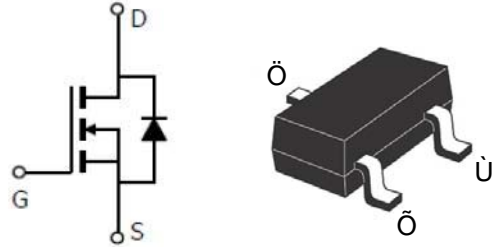
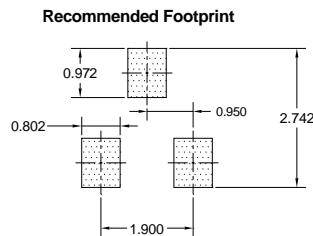
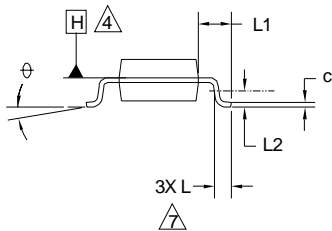
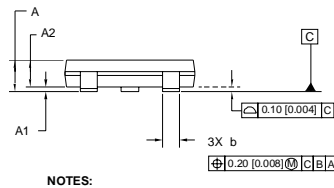
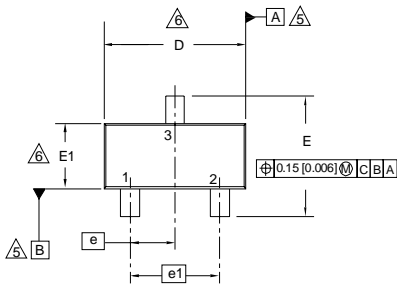


**N-Channel Enhancement Mode Power MOSFET**
**● Features**

$V_{DS} = 100V$   
 $I_D = 2A$   
 $R_{DS(ON)} \leq 240m\Omega (V_{GS} = 10V)$

**● General Description**

The **ATNM03S100S** uses advanced trench technology and design to provide excellent  $R_{DS(ON)}$  with low gate charge. It can be used in a wide variety of applications. The package form is SOT23, which accords with the RoHS standard.

**● Pin Configurations**

**● Package Information**
**SOT23**


SYMBOL	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.89	1.12	0.035	0.044
A1	0.01	0.10	0.0004	0.004
A2	0.88	1.02	0.035	0.040
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.80	3.04	0.110	0.120
E	2.10	2.64	0.083	0.104
E1	1.20	1.40	0.047	0.055
e	0.95	BSC	0.037	BSC
e1	1.90	BSC	0.075	BSC
L	0.40	0.60	0.016	0.024
L1	0.54	REF	0.021	REF
L2	0.25	BSC	0.010	BSC
⌀	0	8	0	8

**N-Channel Enhancement Mode Power MOSFET**
**● Absolute Maximum Ratings (@TA=25°C unless otherwise noted)**

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	$V_{DSS}$	100	V
Gate Source Voltage	$V_{GSS}$	±20	V
Drain Current (Continuous) *AC	$I_D$	2	A
Drain Current (Pulse) *B	$I_{DM}$	5	A
Power Dissipation	$P_D$	1.25	W
Operating Temperature/ Storage Temperature	$T_J/T_{STG}$	-55~175	°C

**● Thermal Characteristics**

Parameter	Symbol	Ratings	Unit
Thermal Resistance ,Junction-to-Ambient	$R_{\theta JA}$	100	°C/W

**● Electrical Characteristics (@TA=25°C unless otherwise noted)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	100	--	--	V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=100V, V_{GS}=0V$	--	--	1	$\mu A$
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS}=V_{GS}, I_{DS}=250\mu A$	1.2	--	2.5	V
Gate Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$	--	--	±100	nA
Drain-Source On-state Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=2A$	--	--	240	m $\Omega$
Forward Transconductance	$g_{fs}$	$I_{SD}=1A, V_{DS}=5V$	1	--	--	S
Total Gate Charge	$Q_g$	$V_{GS}=10V, V_{DD}=50V, I_D=1.3A$	--	5.2	--	nC
Gate- Source Charge	$Q_{gs}$		--	0.75	--	nC
Gate- Drain Charge	$Q_{gd}$		--	1.4	--	nC
Turn-on Delay Time	$t_{d(on)}$	$V_{GS}=10V, V_{DD}=50V, I_D=1.3A$ $R_L=39\Omega, R_{GEN}=1\Omega$	--	6	--	ns
Turn-on Rise Time	$t_r$		--	10	--	ns
Turn-off Delay Time	$t_{d(off)}$		--	10	--	ns
Turn-off Fall Time	$t_f$		--	6	--	ns
Input Capacitance	$C_{iss}$	$V_{GS}=0V, V_{DS}=50V, f=1MHz$	--	190	--	pF
Output Capacitance	$C_{oss}$		--	22	--	pF
Reverse Transfer Capacitance	$C_{rss}$		--	13	--	pF



### N-Channel Enhancement Mode Power MOSFET

● Reverse Diode Characteristics (@TA=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Continuous Diode Forward Current	I <sub>S</sub>	V <sub>G</sub> =V <sub>D</sub> =0V , Force Current	--	--	2	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>SD</sub> =1.3A, V <sub>GS</sub> =0V	--	--	1.2	V

A: The value of R<sub>θJA</sub> is measured with the device mounted on 1in2 FR-4 board with 2oz. Copper, in a still air environment with TA=25C. The value in any given application depends on the user's specific board design.

B: Repetitive rating, pulse width limited by junction temperature .

C: The current rating is based on the t< 10s junction to ambient thermal resistance rating.



## N-Channel Enhancement Mode Power MOSFET

### ● TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS

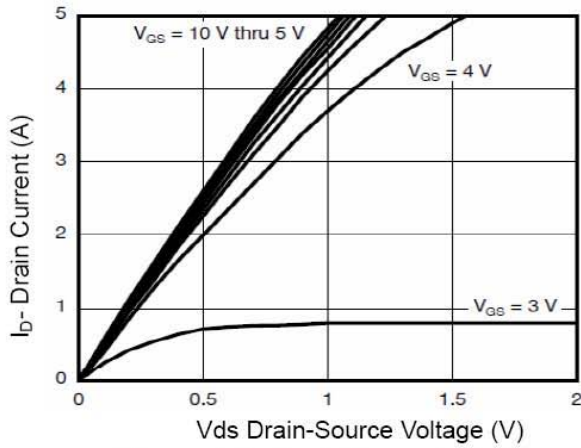


Figure 1 Output Characteristics

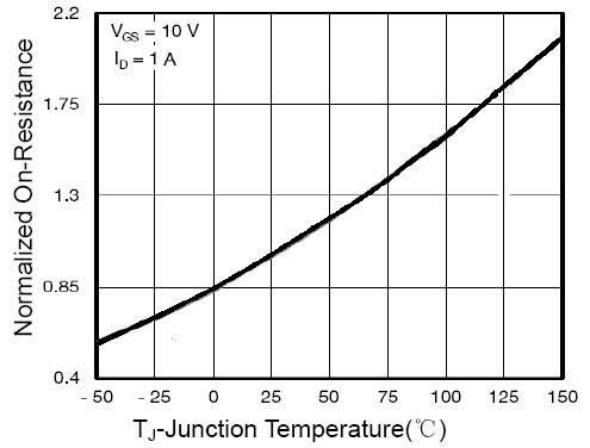


Figure 4 Rds(on)-Junction Temperature

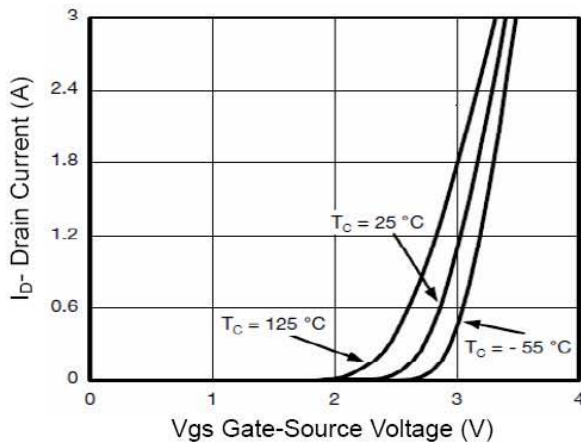


Figure 2 Transfer Characteristics

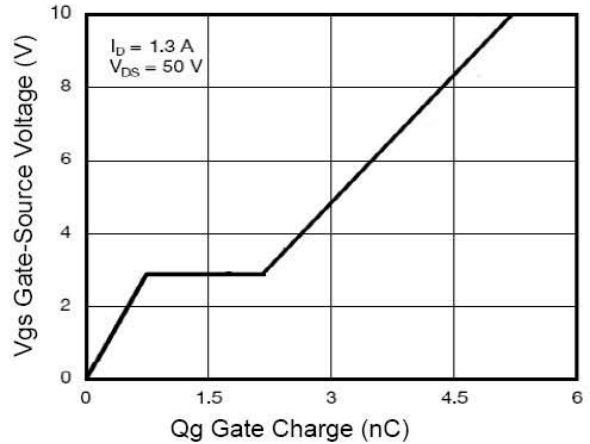


Figure 5 Gate Charge

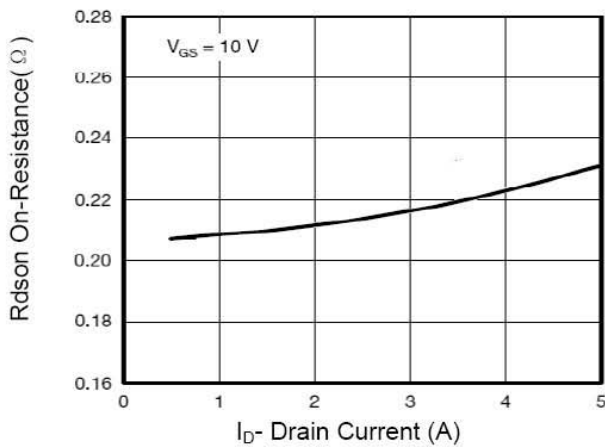


Figure 3 Rds(on)-Drain Current

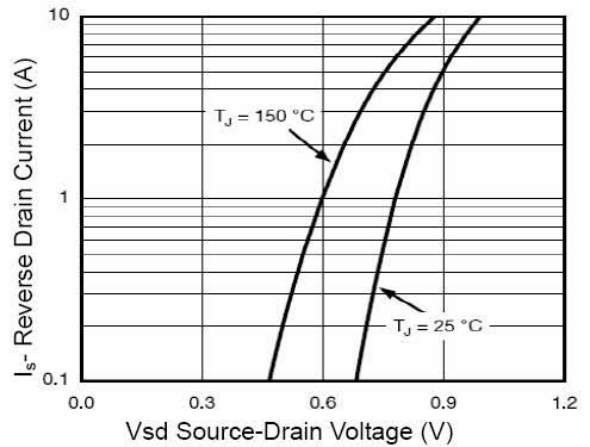


Figure 6 Source-Drain Diode Forward



N-Channel Enhancement Mode Power MOSFET

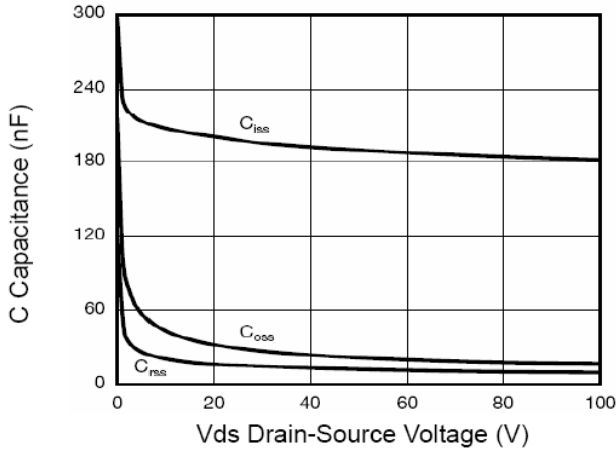


Figure 7 Capacitance vs Vds

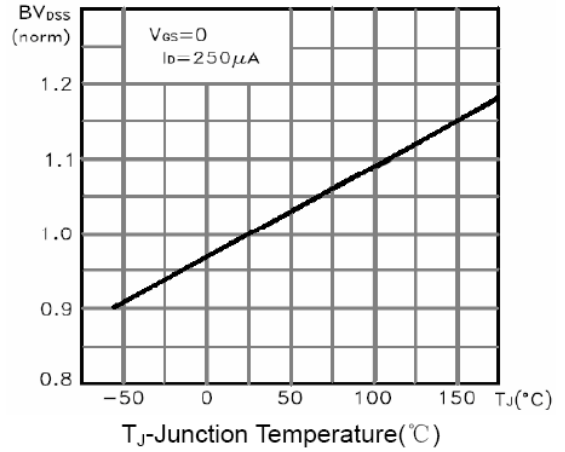


Figure 9  $BV_{DSS}$  vs Junction Temperature

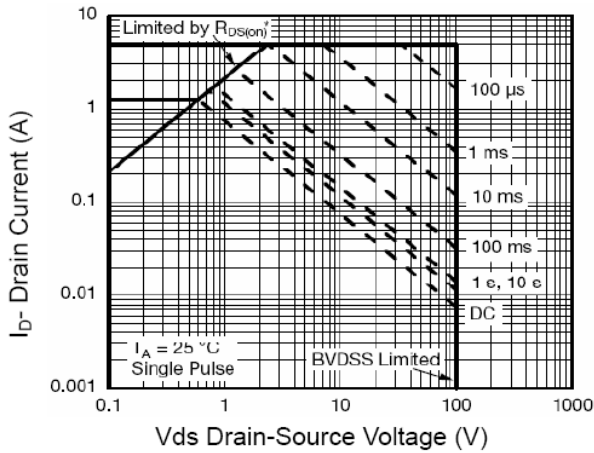


Figure 8 Safe Operation Area

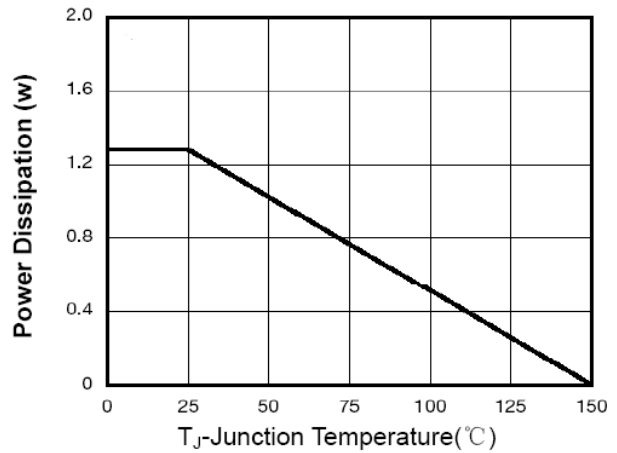


Figure 10 Power De-rating

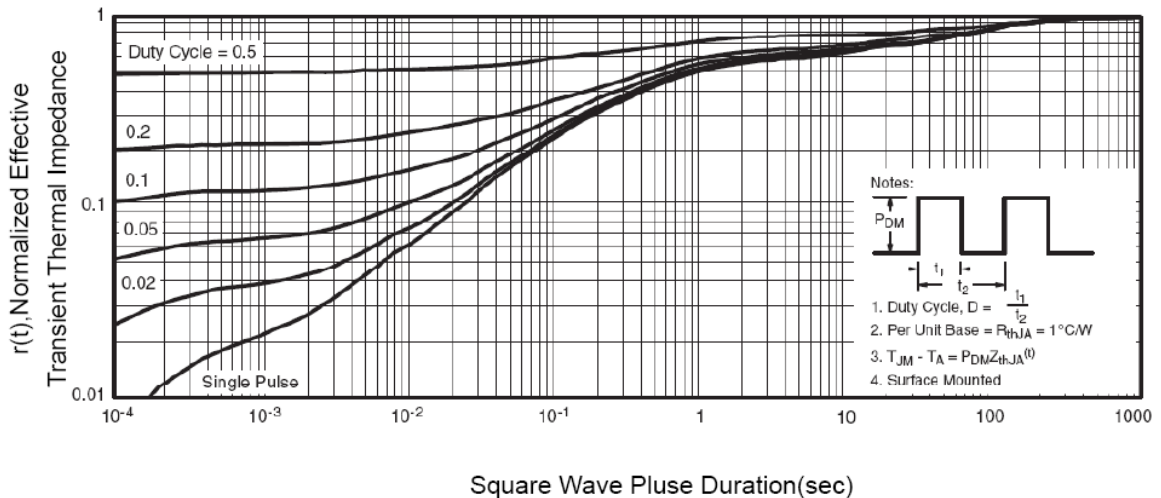
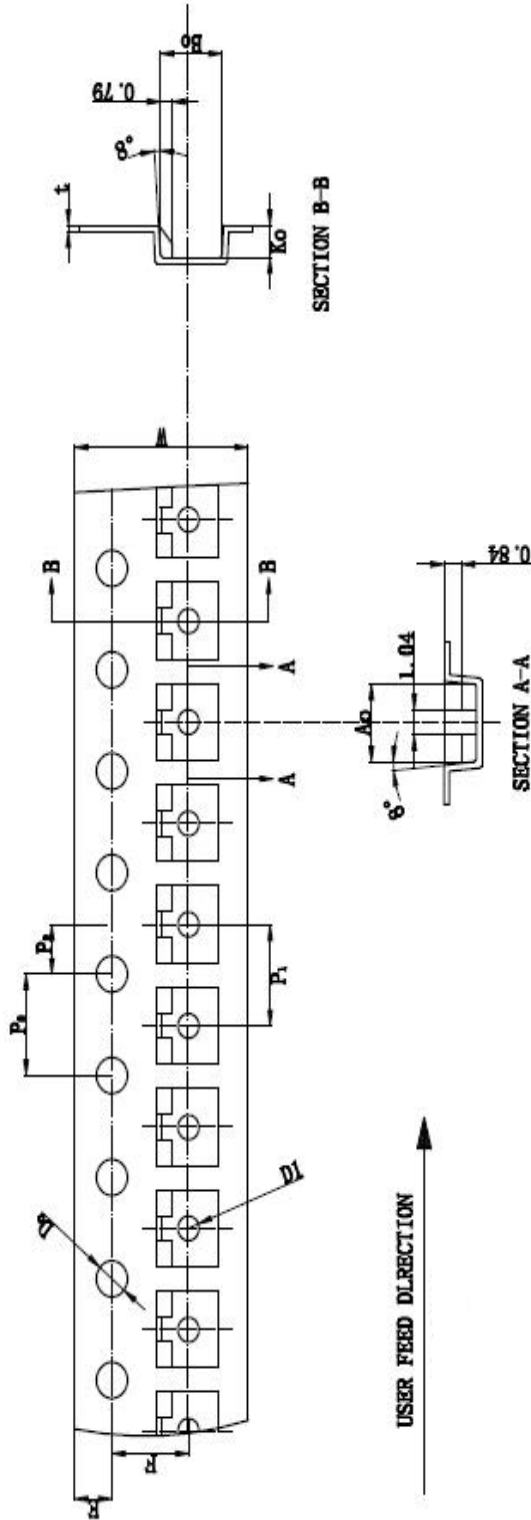


Figure 11 Normalized Maximum Transient Thermal Impedance



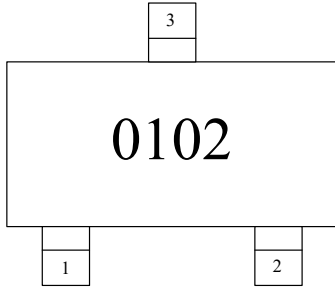
Tape and Reel Specification



W	P	E	F	D	DI	Po	Po10	P2	A0	B0	K0	T
8.00	4.00	1.75	3.50	1.50	1.00	4.00	40.00	2.00	3.15	2.77	1.22	0.20
+0.3/-0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.2	±0.05	±0.1	±0.1	±0.1	±0.02



**Marking Codes**



**Ordering Information**

Part Number	Working Voltage	Quantity Per Reel	Reel Size
TNM03K100KX	100V	3,000	7 Inch

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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

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

Other Similar products are found below :

[IRFD120](#) [JANTX2N5237](#) [BUK455-60A/B](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#) [IPS70R2K0CEAKMA1](#) [SQD23N06-31L-GE3](#)  
[TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [DMN1053UCP4-7](#) [SQJ469EP-T1-GE3](#) [NTE2384](#) [DMC2700UDMQ-7](#)  
[DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#)  
[STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#) [DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [DMN2990UFB-7B](#)  
[IPB80P04P405ATMA2](#) [2N7002W-G](#) [MCAC30N06Y-TP](#) [MCQ7328-TP](#) [NTMC083NP10M5L](#) [NVMFS2D3P04M8LT1G](#) [BXP7N65D](#)  
[BXP4N65F](#) [AOL1454G](#) [WMJ80N60C4](#) [BXP2N20L](#) [BXP2N65D](#) [BXT1150N10J](#) [BXT1700P06M](#) [TSM60NB380CP](#) [ROG](#) [RQ7L055BGTCR](#)  
[DMNH15H110SK3-13](#) [SLF10N65ABV2](#) [BSO203SP](#) [BSO211P](#)