



## General Description

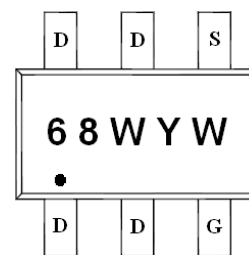
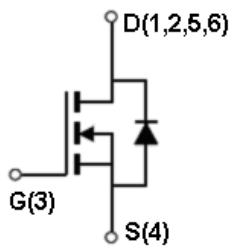
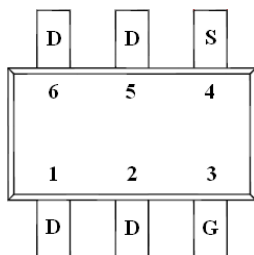
AFN3468W, N-Channel enhancement mode MOSFET, uses Advanced Trench Technology to provide excellent  $R_{DS(ON)}$ , low gate charge.

These devices are particularly suited for low voltage power management, such as smart phone and notebook computer and other battery powered circuits, and low in-line power loss are needed in commercial industrial surface mount applications.

## Features

- $I_D=1.5A, R_{DS(ON)}=320m\Omega@V_{GS}=10V$
- $I_D=1.4A, R_{DS(ON)}=340m\Omega@V_{GS}=6V$
- Super high density cell design for extremely low  $R_{DS(ON)}$
- Exceptional on-resistance and maximum DC current capability
- SOT-23-6L package design

## Pin Description ( SOT-23-6L )



## Application

- DC/DC Converters
- Load Switch
- LED Backlighting in LCD TVs

## Pin Define

Pin	Symbol	Description
1	D	Drain
2	D	Drain
3	G	Gate
4	S	Source
5	D	Drain
6	D	Drain

## Ordering Information

Part Ordering No.	Part Marking	Package	Unit	Quantity
AFN3468WS26RG	68WYW	SOT-23-6L	Tape & Reel	3000 EA

- ※ 68W parts code
- ※ Y year code ( 0 ~ 9 )
- ※ W week code ( A ~ Z = 1 ~ 26 / a ~ z = 27 ~ 52 )
- ※ AFN3468WS26RG : 7" Tape & Reel ; Pb- Free ; Halogen -Free



### Absolute Maximum Ratings

(T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DSS</sub>	150	V
Gate –Source Voltage	V <sub>GSS</sub>	±20	V
Continuous Drain Current(T <sub>J</sub> =150°C)	I <sub>D</sub>	T <sub>c</sub> =25°C	2.0
		T <sub>c</sub> =70°C	1.2
Pulsed Drain Current	I <sub>DM</sub>	6	A
Continuous Source Current(Diode Conduction)	I <sub>S</sub>	4	A
Power Dissipation	P <sub>D</sub>	T <sub>A</sub> =25°C	2.0
		T <sub>A</sub> =70°C	1.3
Operating Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-55/150	°C
Thermal Resistance-Junction to Ambient	R <sub>θJA</sub>	120	°C/W

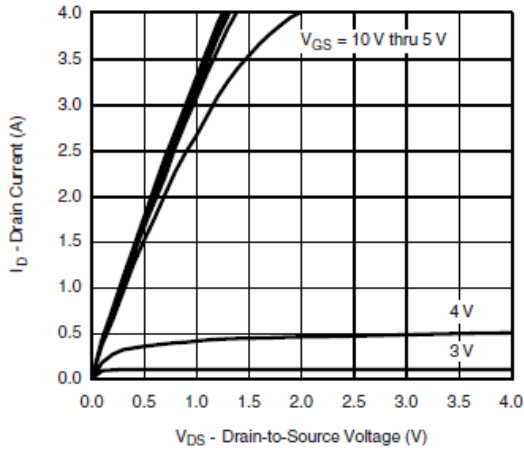
### Electrical Characteristics

(T<sub>A</sub>=25°C Unless otherwise noted)

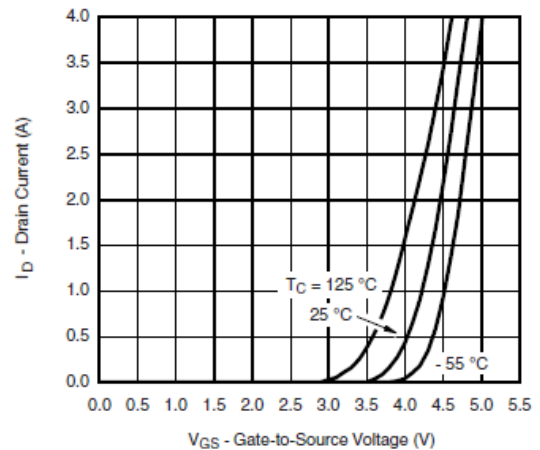
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
<b>Static</b>						
Drain-Source Breakdown Voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =250uA	150			V
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250uA	1.0		4.0	
Gate Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =100V, V <sub>GS</sub> =0V			1	uA
		V <sub>DS</sub> =100V, V <sub>GS</sub> =0V T <sub>J</sub> =85°C			10	
On-State Drain Current	I <sub>D(on)</sub>	V <sub>DS</sub> ≥ 5V, V <sub>GS</sub> =4.5V	5			A
Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =1.5A		280	320	mΩ
		V <sub>GS</sub> =6V, I <sub>D</sub> =1.4A		300	340	
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =1.5A		4.1		S
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =1.7A, V <sub>GS</sub> =0V		0.85	1.2	V
<b>Dynamic</b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =75V, V <sub>GS</sub> =10V I <sub>D</sub> ≧1.5A		5.5	10	nC
Gate-Source Charge	Q <sub>gs</sub>			1.2		
Gate-Drain Charge	Q <sub>gd</sub>			2.0		
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =50V, V <sub>GS</sub> =0V f=1MHz		400		pF
Output Capacitance	C <sub>oss</sub>			20		
Reverse Transfer Capacitance	C <sub>rss</sub>			15		
Turn-On Time	t <sub>d(on)</sub>	V <sub>DD</sub> =75V, R <sub>L</sub> =75Ω I <sub>D</sub> ≧1.0A, V <sub>GEN</sub> =10V R <sub>G</sub> =6Ω		10	20	ns
	t <sub>r</sub>			10	20	
Turn-Off Time	t <sub>d(off)</sub>			25	50	
	t <sub>f</sub>			15	30	



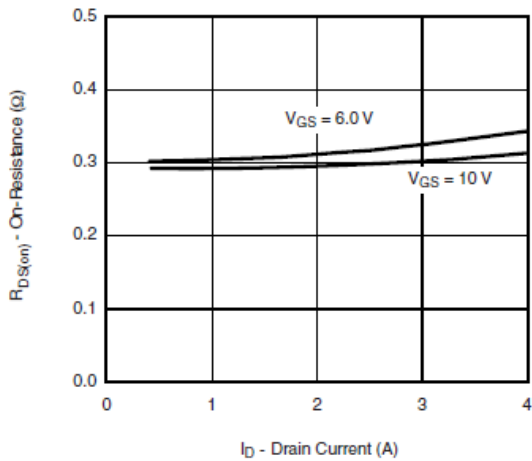
## Typical Characteristics



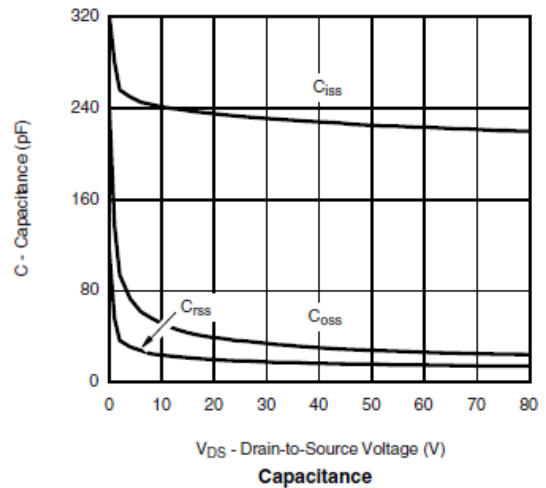
Output Characteristics



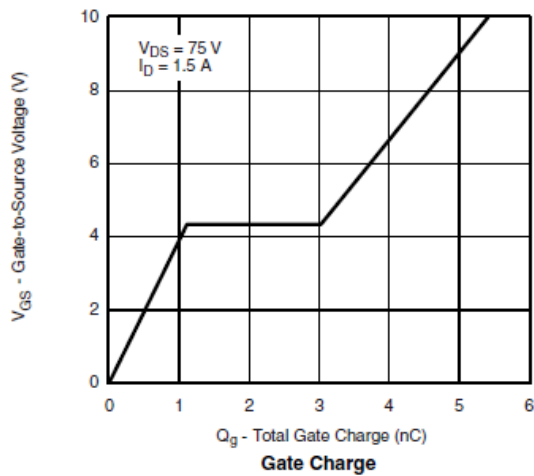
Transfer Characteristics



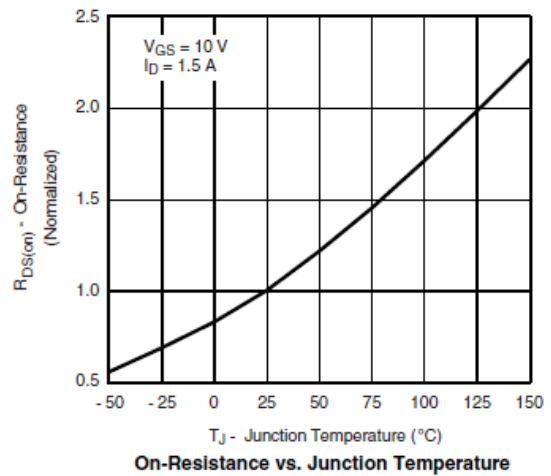
On-Resistance vs. Drain Current



Capacitance



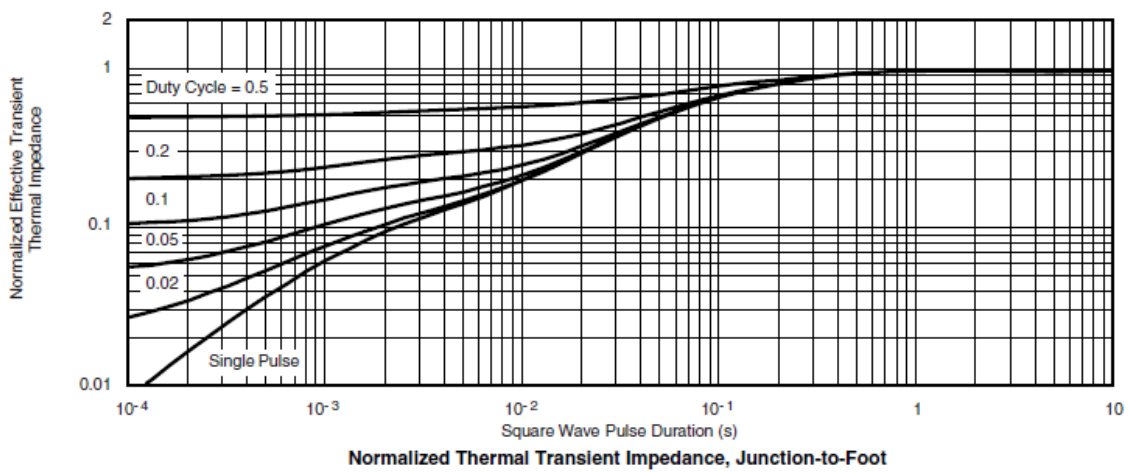
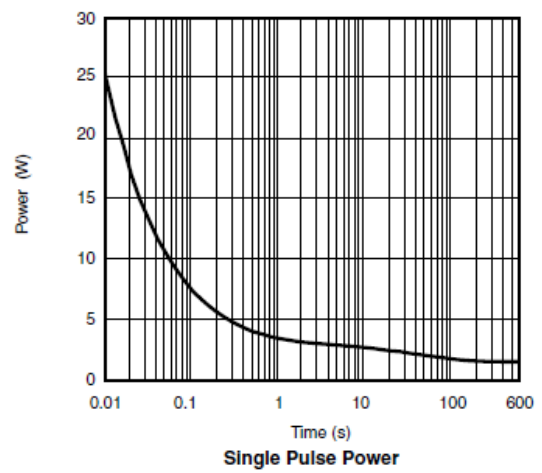
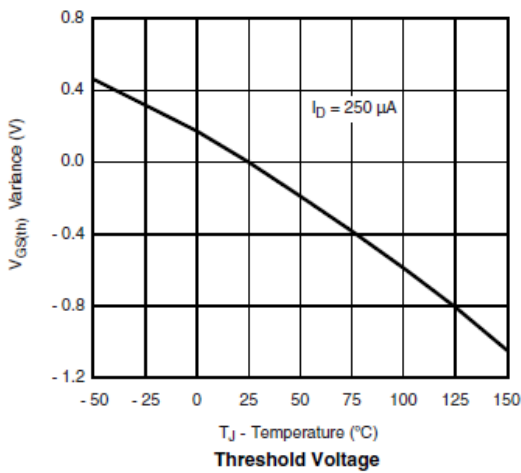
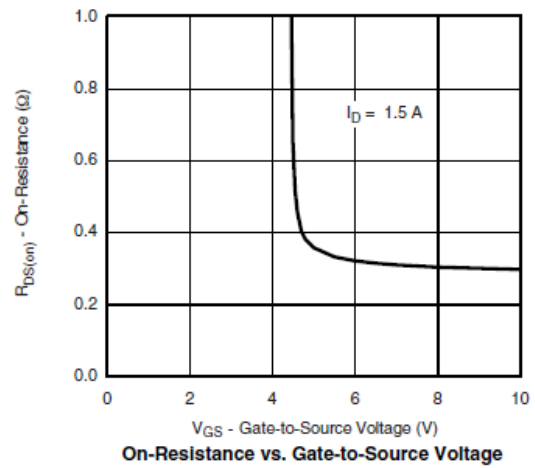
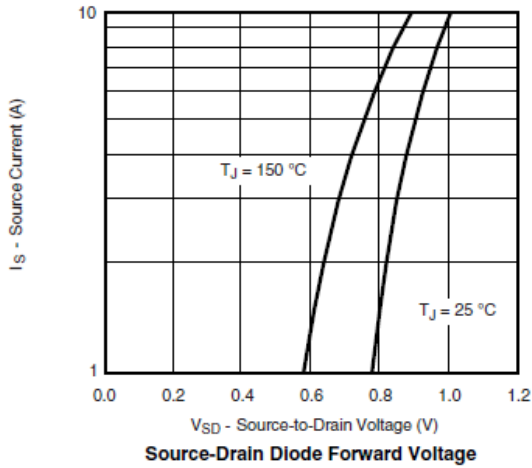
Gate Charge



On-Resistance vs. Junction Temperature



## Typical Characteristics





**Typical Characteristics**

Gate Charge Test Circuit & Waveform



Resistive Switching Test Circuit & Waveforms

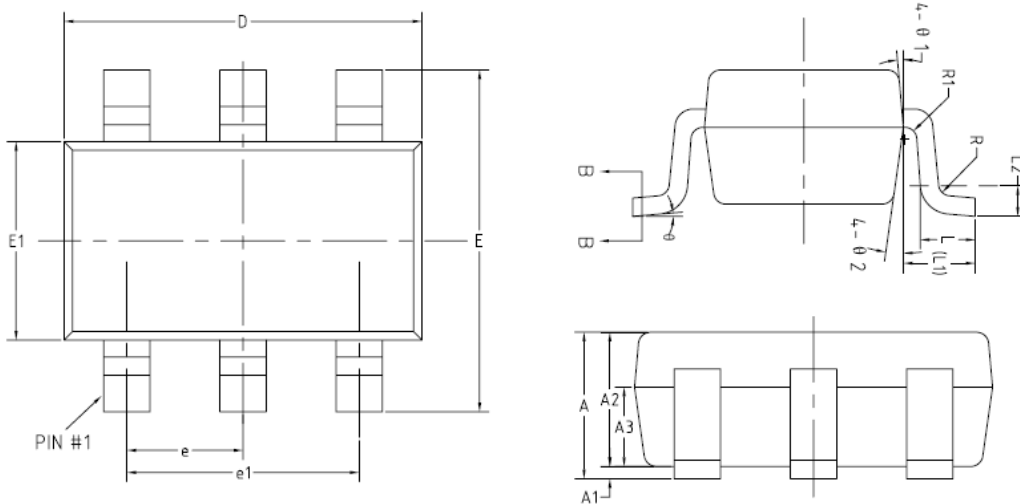


Unclamped Inductive Switching Test Circuit & Waveforms





**Package Information ( SOT-23-6L )**



(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	—	—	1.45
A1	0	—	0.15
A2	0.90	1.10	1.30
A3	0.60	0.65	0.70
b	0.39	—	0.49
b1	0.38	0.40	0.45
c	0.12	—	0.19
c1	0.11	0.13	0.15
D	2.85	2.95	3.05
E	2.60	2.80	3.00
E1	1.55	1.65	1.75
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.05	—	—
R1	0.05	—	0.20
θ	0°	—	8°
θ 1	8°	10°	12°
θ 2	8°	10°	12°

©2010 Alfa-MOS Technology Corp.  
2F, No.80, Sec.1, Cheng Kung Rd., Nan Kang Dist., Taipei City 115, Taiwan (R.O.C.)  
Tel : 886 2) 2651 3928  
Fax : 886 2) 2786 8483  
©http://www.alfa-mos.com