



General Description

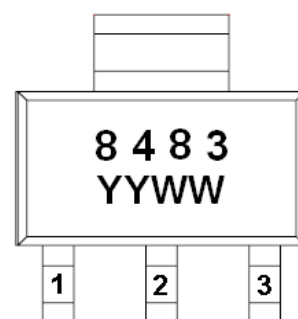
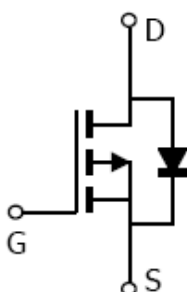
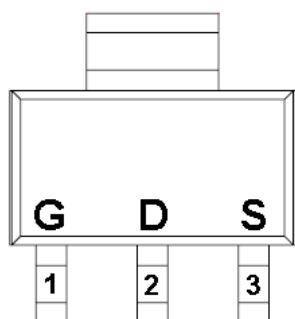
AFP8483, P-Channel enhancement mode MOSFET, uses Advanced Trench Technology to provide excellent $R_{DS(ON)}$, low gate charge.

These devices are particularly suited for low voltage power management, and low in-line power loss are needed in commercial industrial surface mount applications.

Features

- -100V/-3.8A, $R_{DS(ON)} = 260m\Omega @ V_{GS} = -10V$
- -100V/-2.6A, $R_{DS(ON)} = 290m\Omega @ V_{GS} = -4.5V$
- Super high density cell design for extremely low $R_{DS(ON)}$
- SOT-223 package design

Pin Description (SOT-223)



Application

- Motor and Load Control
- LCD TV Inverter & AD/DC Inverter Systems.
- Backlight Inverter for LCD Display
- Load Switch
- CCFL Inverter

Pin Define

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

Ordering Information

Part Ordering No.	Part Marking	Package	Unit	Quantity
AFP8483S223RG	8483	SOT-223	Tape & Reel	2500 EA

※ YY year code

※ WW week code

※ AFP8483S223RG : 13" Tape & Reel ; Pb- Free ; Halogen- Free



Absolute Maximum Ratings

(T_A=25°C Unless otherwise noted)

Parameter	Symbol	Typical	Unit
Drain-Source Voltage	V _{DSS}	-100	V
Gate –Source Voltage	V _{GSS}	±20	V
Continuous Drain Current(T _J =150°C)	I _D	T _A =25°C -3.8	A
		T _A =70°C -2.6	
Pulsed Drain Current	I _{DM}	-15	A
Continuous Source Current(Diode Conduction)	I _S	-5	A
Power Dissipation	P _D	T _A =25°C 2.8	W
		T _A =70°C 1.2	
Operating Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient	R _{θJA}	120	°C/W

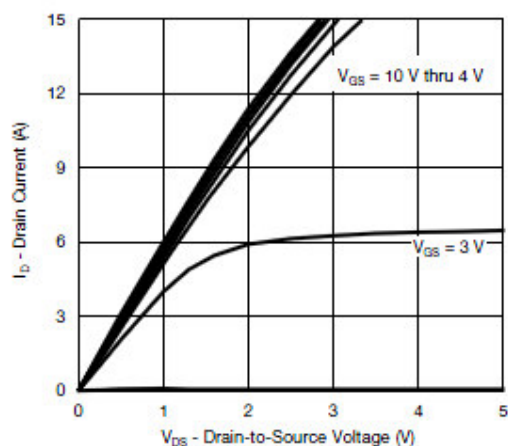
Electrical Characteristics

(T_A=25°C Unless otherwise noted)

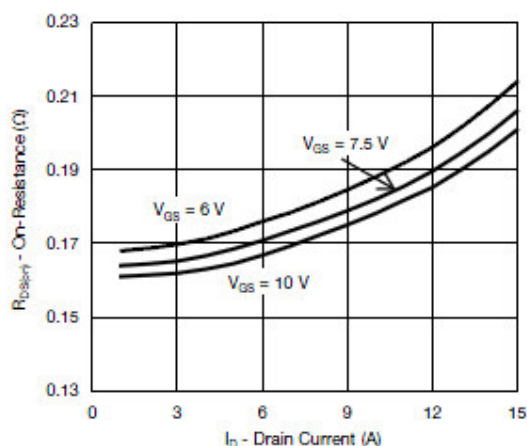
Parameter	Symbol	Conditions	Min.	Typ	Max.	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D = -250uA	-100			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250uA	-1.0		-2.5	
Gate Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -80V, V _{GS} =0V			-1	uA
		V _{DS} = -80V, V _{GS} =0V T _J =85°C			-30	
On-State Drain Current	I _{D(on)}	V _{DS} ≥ -10V, V _{GS} = -10V	-8			A
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = -10V, I _D =-3.8A		235	260	mΩ
		V _{GS} = -4.5V, I _D =-2.6A		255	290	
Forward Transconductance	g _{FS}	V _{DS} = -15V, I _D = -3.2A		12		S
Diode Forward Voltage	V _{SD}	I _S = -2A, V _{GS} =0V		-0.8	-1.3	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} =-50V, V _{GS} =-4.5V I _D = -2.6A		12	20	nC
Gate-Source Charge	Q _{gs}			3.0		
Gate-Drain Charge	Q _{gd}			4.5		
Input Capacitance	C _{iss}	V _{DS} =-50V, V _{GS} =0V f=1MHz		1100		pF
Output Capacitance	C _{oss}			70		
Reverse Transfer Capacitance	C _{rss}			45		
Turn-On Time	t _{d(on)}	V _{DD} =-50V, R _L =17Ω I _D = -2.6A, V _{GEN} = -10V R _G =1Ω		8	15	ns
	t _r			15	20	
Turn-Off Time	t _{d(off)}			35	50	
	t _f			10	25	



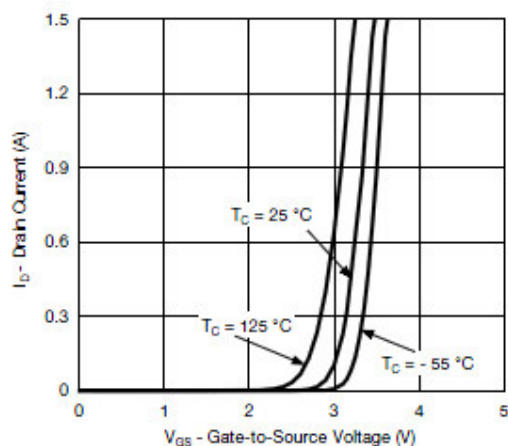
Typical Characteristics



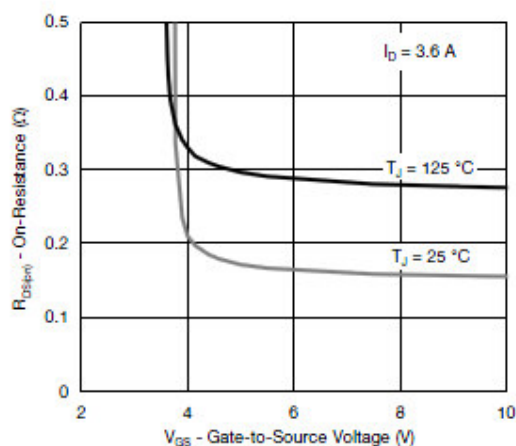
Output Characteristics



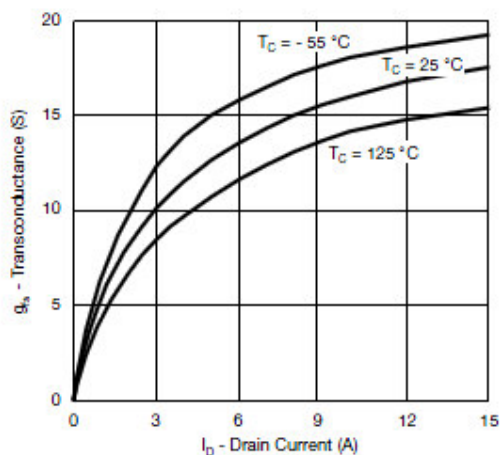
On-Resistance vs. Drain Current



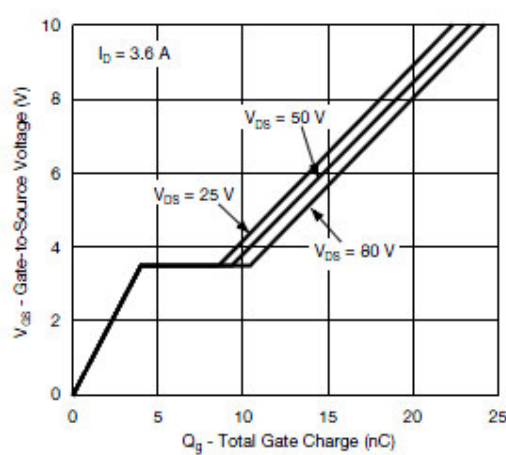
Transfer Characteristics



On-Resistance vs. Gate-to-Source Voltage



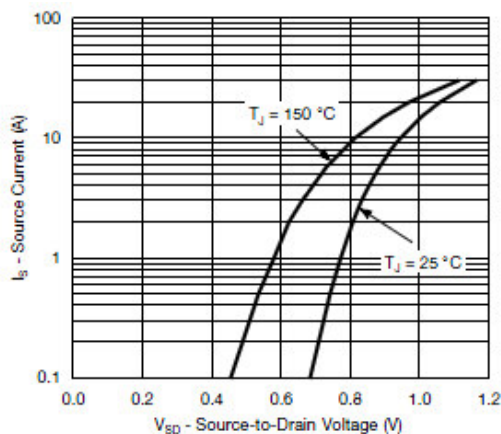
Transconductance



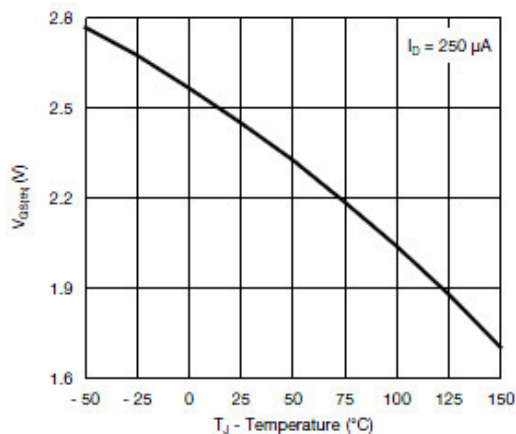
Gate Charge



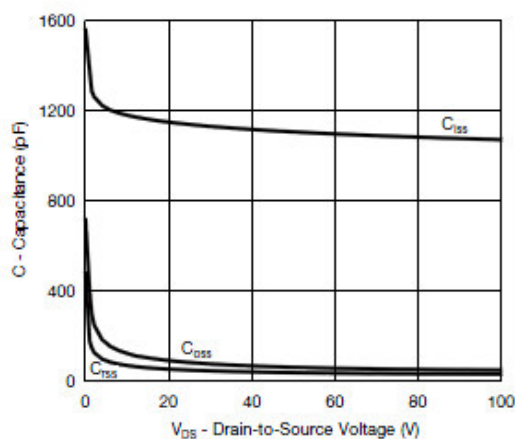
Typical Characteristics



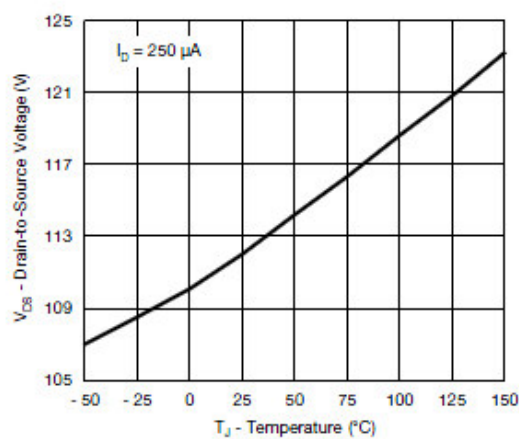
Source-Drain Diode Forward Voltage



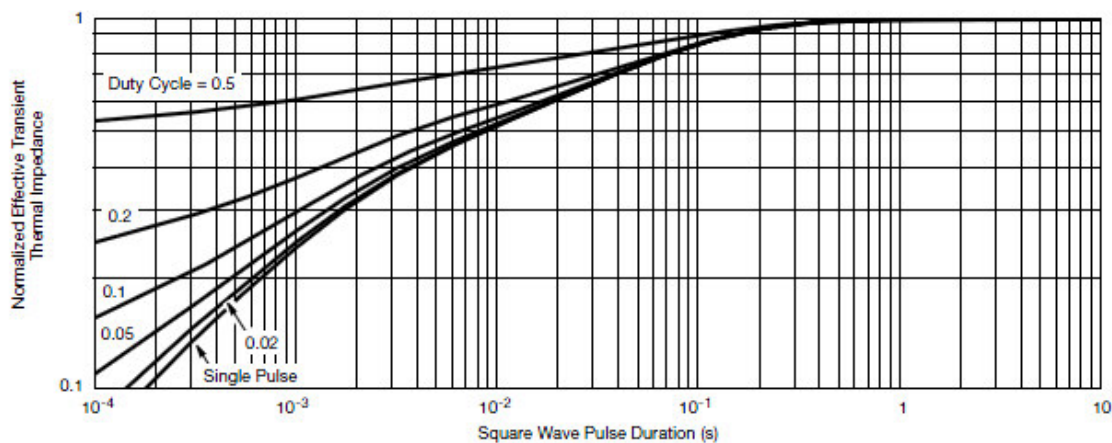
Threshold Voltage



Capacitance



Drain Source Breakdown vs. Junction Temperature

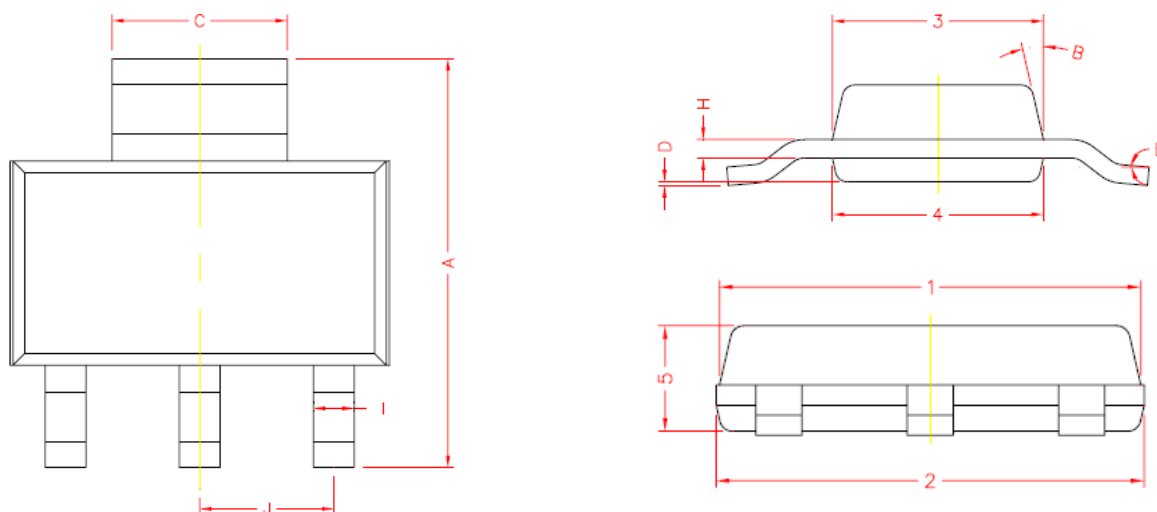


Normalized Thermal Transient Impedance, Junction-to-Case





Package Information (SOT-223)



REF.	DIMENSIONS	
	Millimeters	
	Min.	Max.
A	6.70	7.30
C	2.90	3.10
D	0.02	0.10
E	0°	10°
I	0.60	0.80
H	0.25	0.35
B	13° TYP.	
J	2.30 REF.	
1	6.30	6.70
2	6.30	6.70
3	3.30	3.70
4	3.30	3.70
5	1.40	1.80

©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