ACE4826B

Dual N-Channel Enhancement Mode MOSFET

Description

This N-Channel enhancement mode power FETs are produced with high cell density, DMOS trench technology, which is especially used to minimize on-state resistance. This device is suitable for use as a load switch, power management in PWM controlled DC/DC Converter and push-pull DC/AC Inverter Systems.

Features

- V_{DS} 60V, V_{GS} 20V, I_D 5.5A
- $R_{DS(ON)}$@10V, 30mΩ (typ.)
- $R_{DS(ON)}$@4.5V, 35mΩ (typ.)

Absolute Maximum Ratings

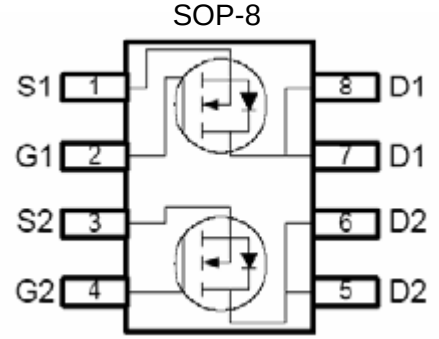
Parameter	Symbol	Max	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current - Continuous	I_D	5.5	A
Total Power Dissipation (Note1,2)	P_D	1	W
Operating and Storage Junction Temperature Range	T_J/T_{STG}	-55/150	°C

Note: 1. Surface Mounted on 1in pad area, t ≤10sec.

2. Rating for a single chip.

Packaging Type

SOP-8



Ordering information

ACE4826B XX + H

- Halogen - free
- Pb - free
- FM : SOP-8

Electrical Characteristics

T_A=25℃, unless otherwise noted.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Off characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250 uA	60			V
Gate Leakage Current	I_{GSS}	V_{DS}=0V,V_{GS}=±20V			±100	uA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			1	uA
On characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_{DS}=250uA	1	1.4	3	V
Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=5.5A		30	41	mΩ
		V_{GS}=4.5V, I_D=4.5A		35	52	
Drain-Source Diode Characteristics And Maximum Ratings						
Diode Forward Voltage	V_{SD}	I_S=2A, V_{GS}=0V	0.5	0.77	1	V
Switching characteristics						
Turn-On Time	td(on)	V_{GS}=10V, R_L=5.4Ω, V_{DS}=30V, R_{GEN}=3Ω, I_D=5.5A			15	nS
	tr				20	
Turn-Off Time	td(off)				40	
	tf				15	
Dynamic characteristics						
Input Capacitance	Ciss	V_{GS}=0V, V_{DS}=10V, f=1MHz		1180		pF
Output Capacitance	Coss			170		
REVERSE Transfer Capacitance	Crss			100		

Typical Performance Characteristics

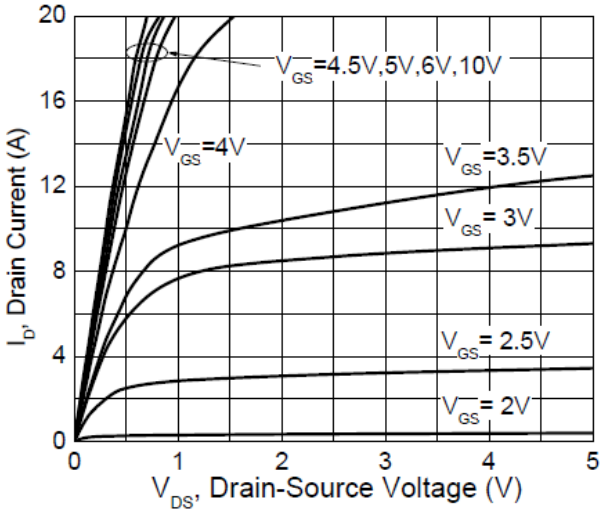


Figure 1. Output Characteristics

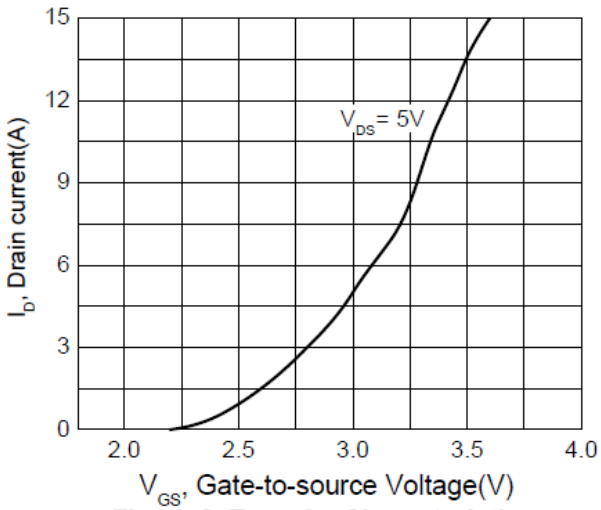


Figure 2. Transfer Characteristics

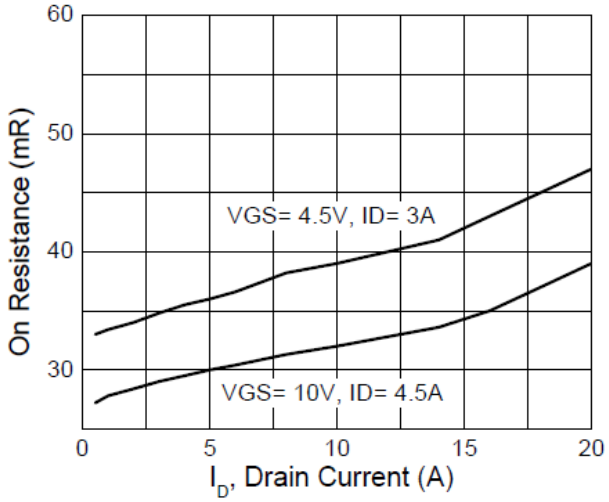


Figure 3. On Resistance VS I_D

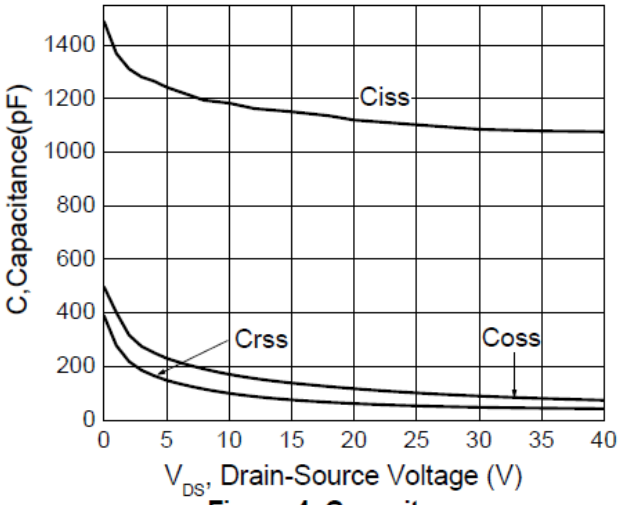


Figure 4. Capacitance

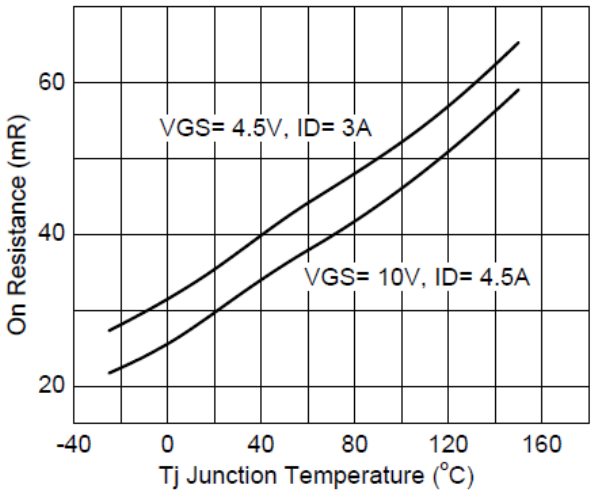


Figure 5 . On resistance VS Temperature

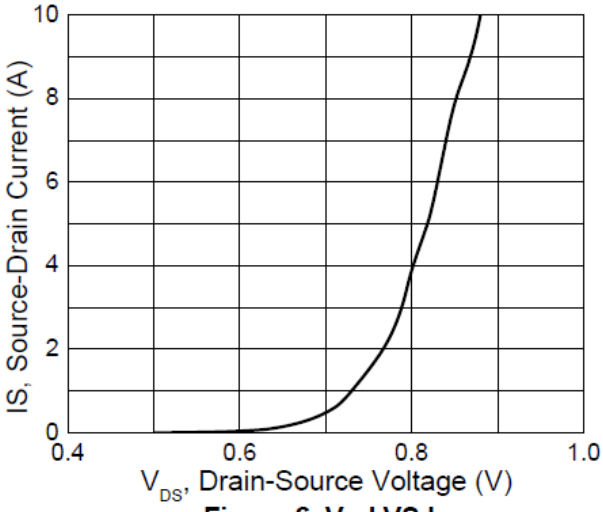


Figure 6. Vsd VS Is

Typical Performance Characteristics

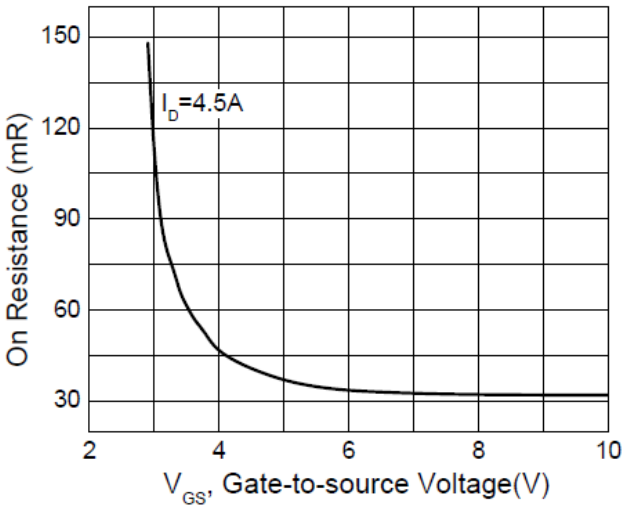


Figure 7. On Resistance VS V_{GS}

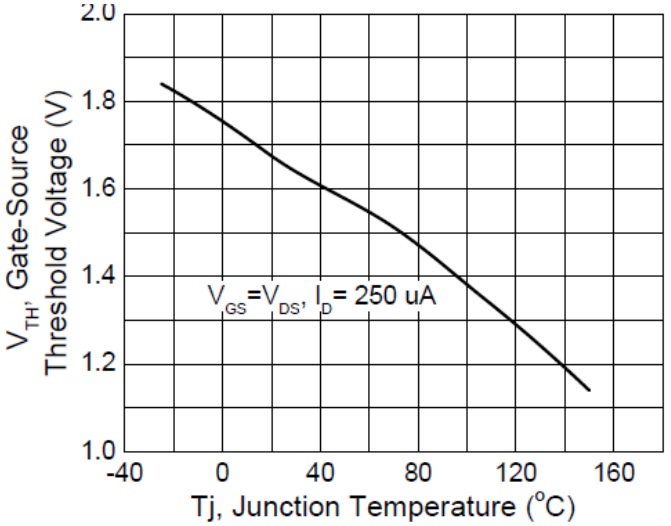
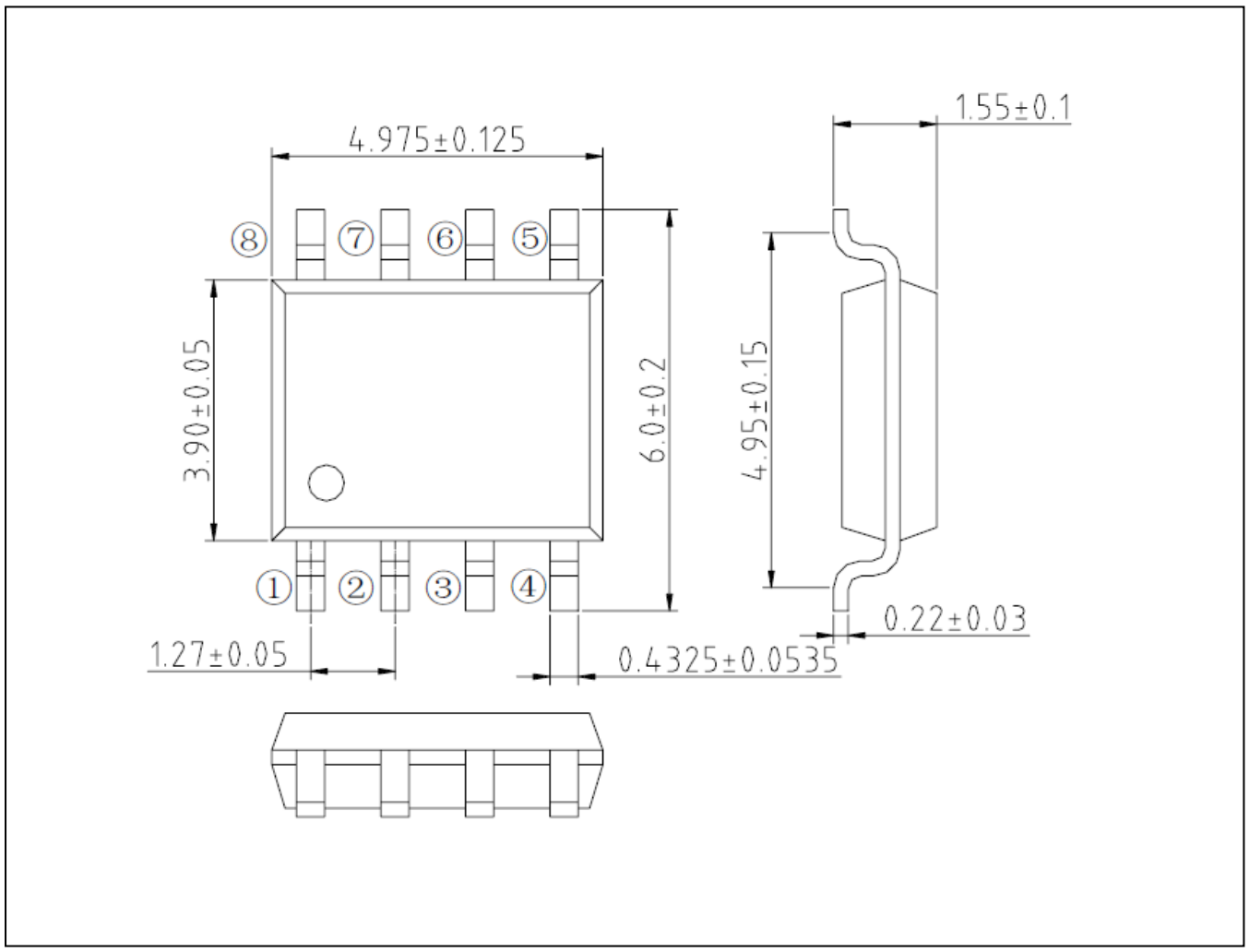


Figure 8. Gate Thershold Vs. Temperature

Packing Information

SOP-8



Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Electronics Co., LTD. As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and shoes failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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