

Features

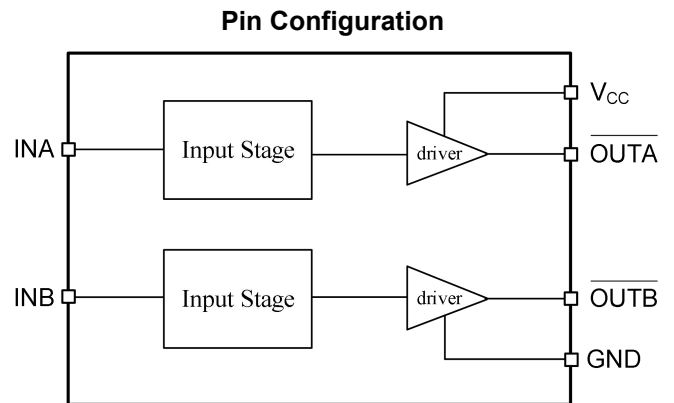
- Latch Protection: withstand 0.5 A reverse current
- Ability to Handle Negative Voltages (-10 V) at Inputs
- Low Output Impedance
- Two Independent Gate-Drive Channel
- 2-A Peak Output Current
- 4.5 to 20-V Single-Supply Range
- High Ability of driving capacitive load
- Operating Temperature Range of -40 to 125° C
- Turn on/Turn off Delays: 25ns

Description

IR4426STR is power switch driver. It has a matching rise and fall time when charging and discharging the gate of the power switch. IR4426STR has high latch resistance under all conditions in its rated power and voltage range. When noise spikes of up to 5V (either polarity) occur on the ground pin, the IR4426STR is not damaged. IR4426STR can accept reverse currents up to 500 mA to force back its output without damage or logic confusion. All ports are fully protected by up to 2.0 kV electrostatic discharge (ESD).

Applications

- Switch-Mode Power Supplies
- line drivers
- Pulse transformer driver
- Driving MOSFETs and IGBTs
- Motor drives
- pulse generator
- Switch-Mode Power Supplies
- DC-to-DC Converters
- class D switching amplifier



Pin Configuration and Functions

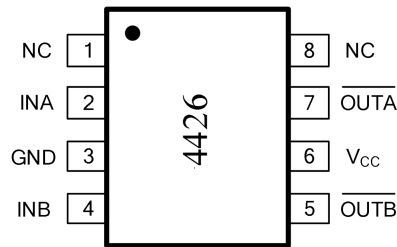


Figure7-1 8-Pin SOP-8

Table7-1 Lead Definitions

PIN	NAME	DESCRIPTION
1	NC	No connection
2	INA	Input to Channel A
3	GND	Ground: All signals are referenced to this pin.
4	INB	Input to Channel B
5	$\overline{\text{OUTB}}$	Output of Channel B
6	V _{cc}	Bias supply input
7	$\overline{\text{OUTA}}$	Output of Channel A
8	NC	No connection

Dual 2A Peak High-Speed Low-Side Power-MOSFET Drivers
Specifications

Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. All voltages are with respect to GND unless otherwise noted, Currents are positive into, negative out of the specified terminal, environment temperature is 25 °C.

Symbol	Definition	MIN	MAX	UNIT
V _{CC}	Supply voltage range	—	25	V
V _{IN}	INA, INB voltage	-12	25	
ESD	Human body model (HBM)	—	2000	V
	Charged device model (CDM)	—	500	V
PD1	DFN package power (TA ≤70°C)	—	340	mW
PD2	SOIC package power (TA ≤70°C)	—	470	mW
T _J	Operating junction temperature	—	+150	°C
T _S	Storage temperature	-45	+150	
V _{CC}	Supply voltage range	4.5	20	V
T _C	ambient temperature	-40	125	°C

T_A= 25°C, V_{CC}=15V, C_{LOAD}=1000pF (unless otherwise noted)

Symbol	Definition	MIN	TYP	MAX	UNIT
V _{IH}	Input signal high threshold	2.4	—	—	V
V _{IL}	Input signal low threshold	—	—	0.8	V
I _{IN+}	Input current (V _{IN} =5V)	—	100	200	μA
I _{IN-}	Input current (V _{IN} =0V)	—	150	250	μA
V _{OH}	High output voltage	V _{CC} -0.025	—	—	V
V _{OL}	Low output voltage	—	—	0.025	V
R _{OH}	Output pullup resistance (I _O =100mA)	—	4	8	Ω
R _{OL}	Output pulldown resistance (I _O =100mA)	—	2	4	Ω
I _{PK}	Peak output source current	—	2	—	A
I _{REV}	Reverse current that latch protection can withstand (Working cycle ≤2%, t ≤300us)	—	>0.5	—	A
t _R	Rise time	—	—	30	ns
t _F	Fall time	—	—	30	ns
t _{ON}	Turn-on propagation delay	—	25	50	ns
t _{OFF}	Turn-off propagation delay	—	25	50	ns
I _{Q1}	V _{CC} quiescent supply current (V _{INA} =V _{INB} =HIGH)	—	—	1	mA
I _{Q0}	V _{CC} quiescent supply current (V _{INA} =V _{INB} =LOW)	—	—	1	mA

Detailed description

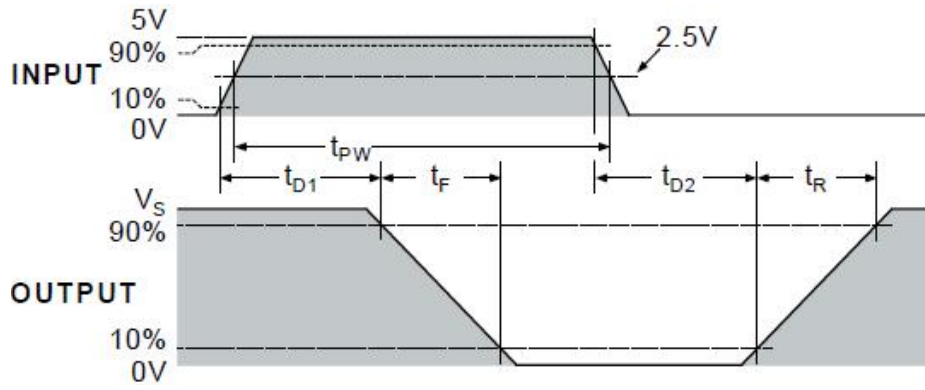


Figure 9-1 Input-Output Functionality Diagram

Functional Block Diagram

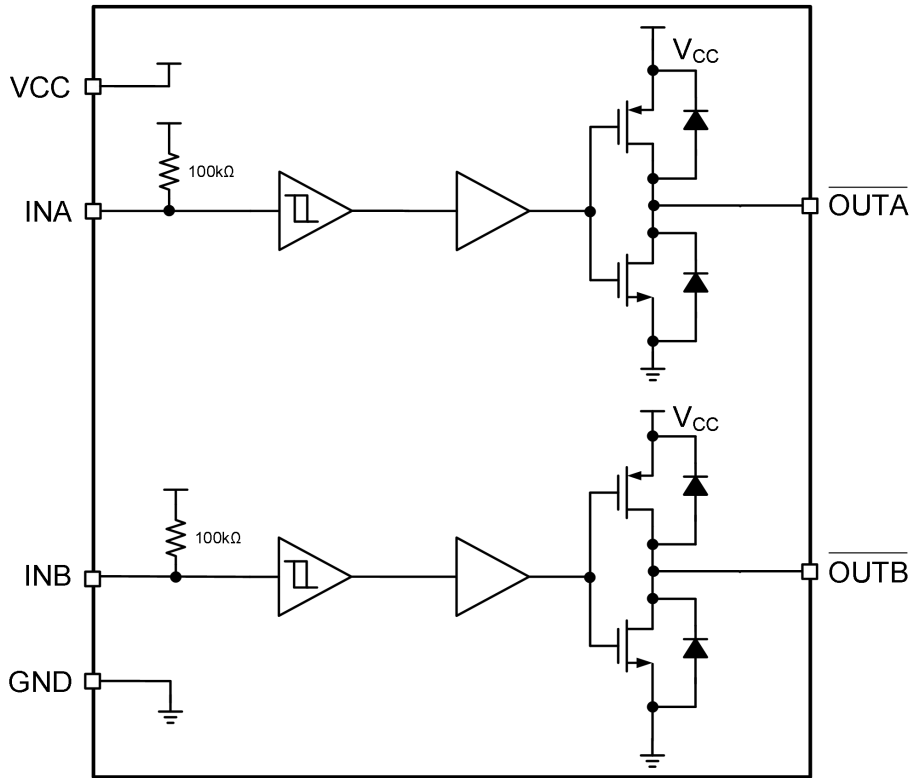


Figure 10-1 Function Block Diagram of IR4426

Typical Application

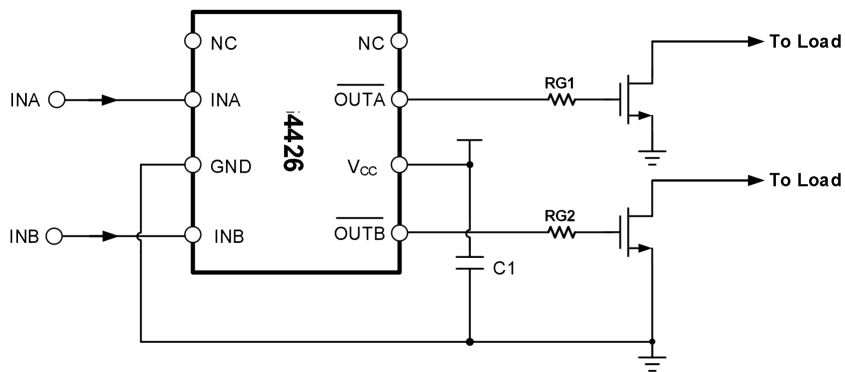
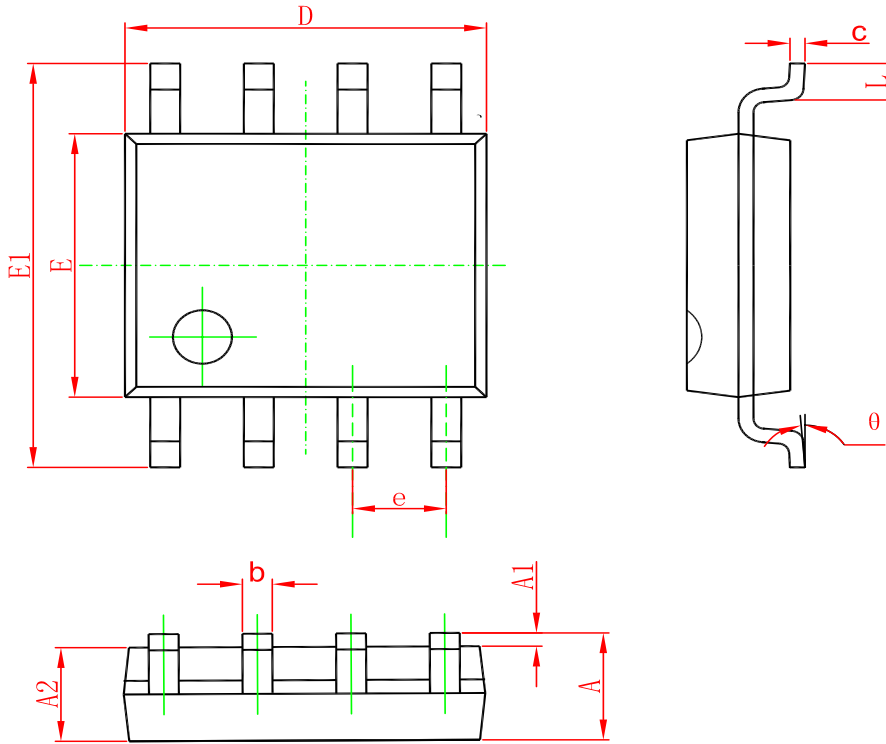


Figure 10-2 Typical Application Diagram of IR4426

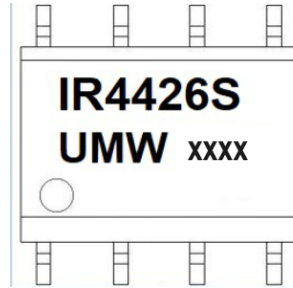
PACKAGE OUTLINE DIMENSIONS

SOP-8



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
theta	0°	8°	0°	8°

Marking



Ordering information

Order code	Package	Baseqty	Deliverymode
UMW IR4426STR	SOP-8	2500	Tape and reel