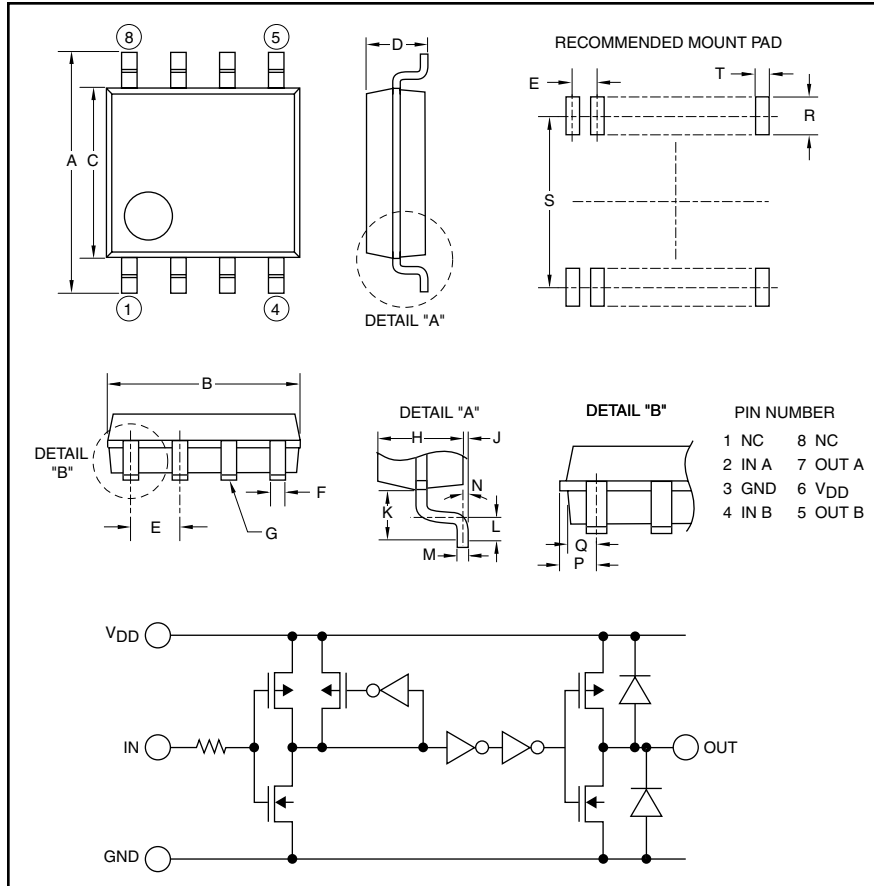


HVIC

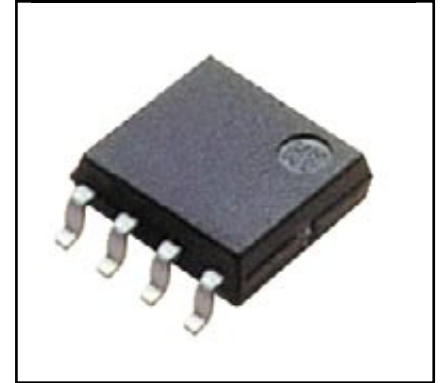
General Purpose Driver
24 Volts/+0.8A/-0.6A



Outline Drawing and Circuit Diagram

Dimensions	Inches	Millimeters
A	0.24±0.01	6.2±0.3
B	0.2±0.008	5.0±0.2
C	0.17±0.008	4.4±0.2
D	0.08 Max.	1.9 Max.
E	0.05	1.27
F	0.015±0.002	0.4±0.05
G	0.004	0.1
H	0.06	1.5
J	0.002 Min.	0.05 Min.

Dimensions	Inches	Millimeters
K	0.04	0.9
L	0.015±0.008	0.4±0.2
M	0.006±0.002	0.15±0.05
N	10° Max.	10° Max.
P	0.03	0.745
Q	0.023	0.595
R	0.05 Min.	1.27 Min.
S	0.23	5.72
T	0.76	0.76



Description:

M81716FP is a dual inverting general purpose driver.

Features:

- ☐ Power Supply Range of Operation (4.5V ~ 24V)
- ☐ High Speed Switching Time (22ns Typical, CL = 1000pF)
- ☐ Dual Inverting
- ☐ SOP-8 Package
- ☐ +0.8A to -0.6A Output Current

Applications:

- ☐ HID Ballast
- ☐ PDP
- ☐ MOSFET Driver

Ordering Information:

M81716FP is a +0.8A/-0.6A, 24 Volt HVIC, General Purpose Driver

M81716FP

HVIC, General Purpose Driver

24 Volts/+0.8A/-0.6A

Absolute Maximum Ratings, $T_a = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	M81716FP	Units
Supply Voltage	V_{DD}	0 ~ 24	Volts
Logic Input Voltage (IN A/B Terminal)	V_{IN}	GND-0.3 ~ $V_{DD}+0.3$	Volts
Package Power Dissipation ($T_a = 25^\circ\text{C}$, On Board)	P_d	—	Watts
Junction Temperature	T_j	-40 ~ 125	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ 125	$^\circ\text{C}$

Recommended Operating Conditions

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Supply Voltage	V_{DD}		4.5	—	17	Volts
Logic Supply Voltage	V_{IN}	IN A/B Terminal	GND	—	V_{DD}	Volts
Operating Temperature	T_{opr}		-40	—	100	$^\circ\text{C}$

Electrical AC Characteristics, $V_{DD} = 15\text{V}$, $V_{IN} = 0\text{V}$, 5V unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Turn-On Rise Time	t_r	CL = 1000pf	—	35	—	ns
Turn-Off Fall Time	t_f	CL = 1000pf	—	25	—	ns
Delay Time 1	t_{D1}	CL = 1000pf	—	22	—	ns
Delay Time 2	t_{D2}	CL = 1000pf	—	22	—	ns

Electrical DC Characteristics, $V_{DD} = 4.5 \sim 17\text{V}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Logic "1" Input Voltage	V_{IH}	$V_{DD} = 15\text{V}$	4.4	—	—	Volts
Logic "0" Input Voltage	V_{IL}	$V_{DD} = 15\text{V}$	—	—	1.8	Volts
Input Bias Current	I_{IN}	$V_{IN} = 0\text{V}$ or V_{DD}	-1.0	—	1.0	μA
Output Protection Diode Current Capability	I_{DI}	—	300	—	—	mA
High Level Output Voltage	V_{OH}	$I_O = 0$	$V_{DD}-0.1$	—	—	Volts
Low Level Output Voltage	V_{OL}	$I_O = 0$	—	—	0.1	Volts
V_{DD} Supply Current	I_{supp}	$V_{DD} = 15\text{V}$, $V_{IN} = 3\text{V}$ (Both Inputs)	—	4.0	8.0	mA
		$V_{DD} = 15\text{V}$, $V_{IN} = 0\text{V}$ (Both Inputs)	—	—	0.05	mA
Output High Level Short-Circuit Pulsed Current	IO+	$V_{DD} = 15\text{V}$, $PW^* \leq 10\mu\text{s}$, $V_{OUT} = 0\text{V}$	0.8	1.0	—	Amperes
Output Low Level Short-Circuit Pulsed Current	IO-	$V_{DD} = 15\text{V}$, $PW^* \leq 10\mu\text{s}$, $V_{OUT} = 9\text{V}$	0.6	0.8	—	Amperes
Output High Level ON Resistance	R_{OUT}	$V_{DD} = 15\text{V}$, $I_{load}^{**} = 10\text{mA}$, $V_{OUT} = \text{"H"}$	—	7.0	12.0	Ω
Output Low Level ON Resistance	R_{OUT}	$V_{DD} = 15\text{V}$, $I_{load}^{**} = 10\text{mA}$, $V_{OUT} = \text{"L"}$	—	6.0	11.0	Ω

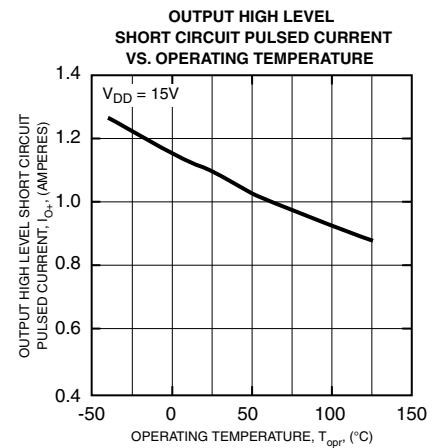
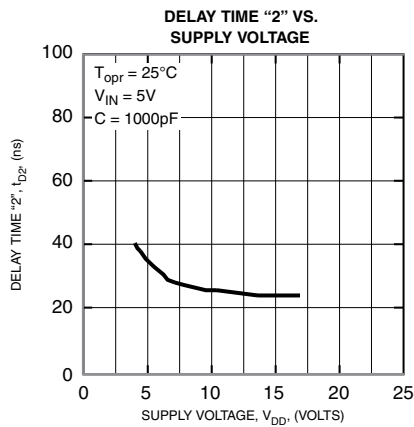
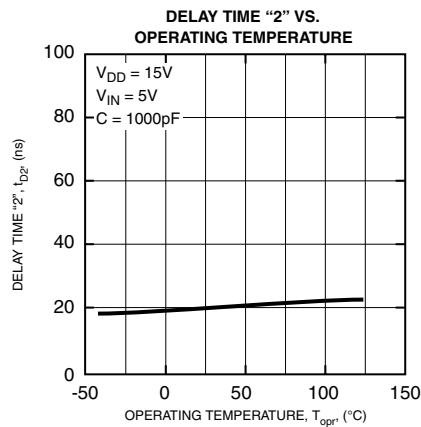
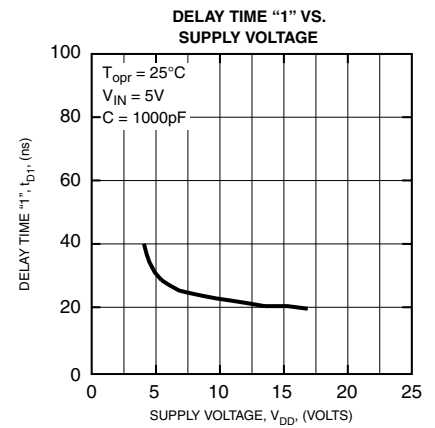
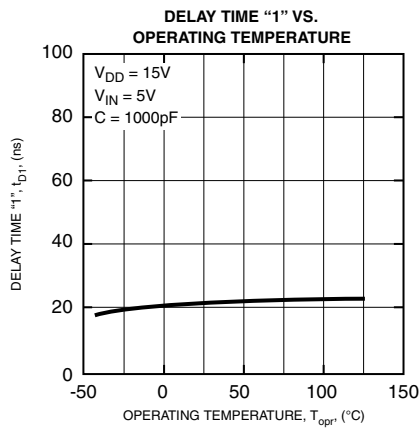
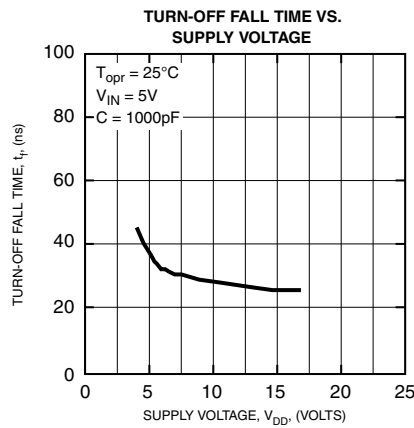
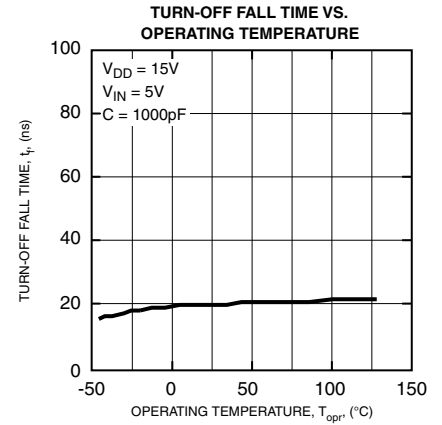
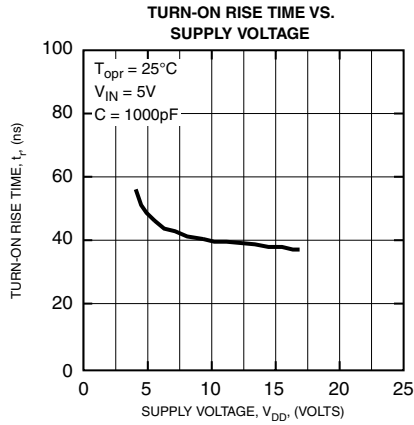
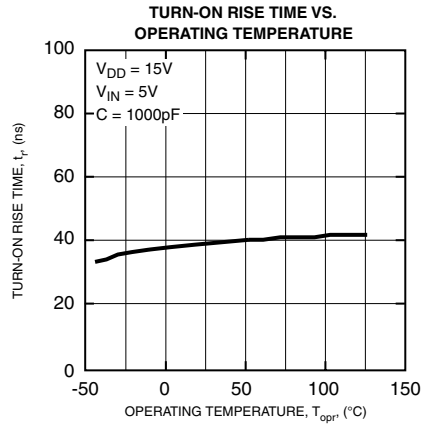
*PW : Input Pulse Width

**I_{load} : Supply Input and Output Current to the OUT A/B Terminal

M81716FP

HVIC, General Purpose Driver

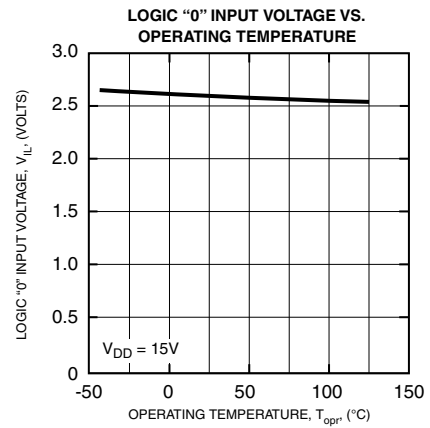
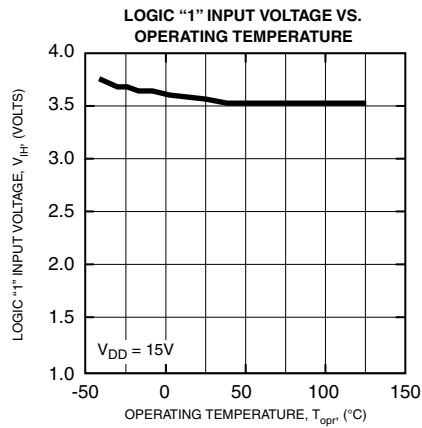
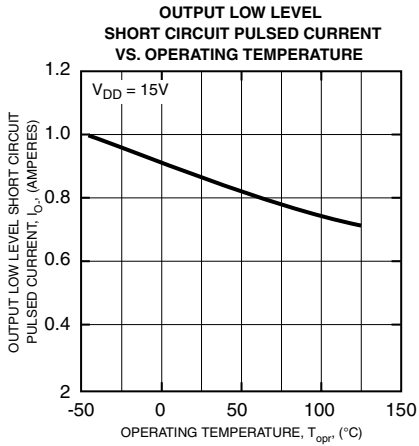
24 Volts/+0.8A/-0.6A



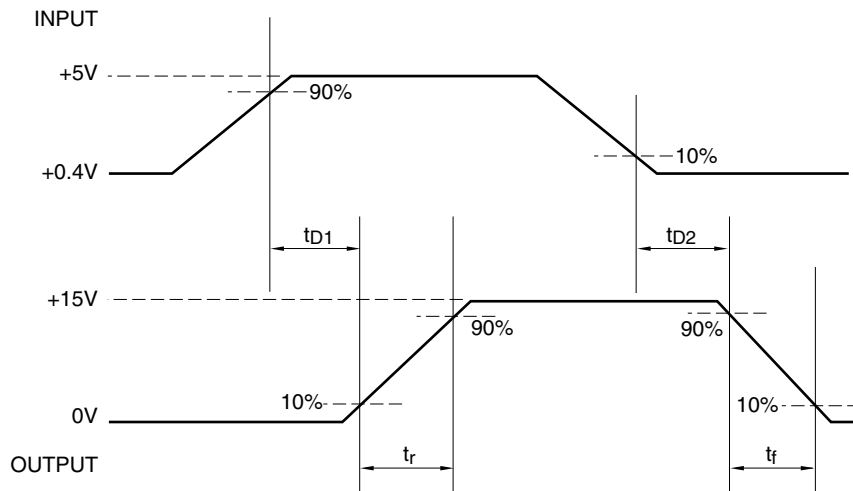
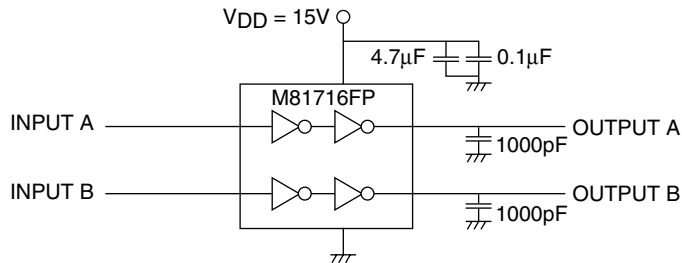
M81716FP

HVIC, General Purpose Driver

24 Volts/+0.8A/-0.6A



SWITCHING TIME EXAMINATION CIRCUIT DIAGRAM



INPUT RISE AND FALL TIMES = 5ns