

Quad Positive Voltage Driver for GaAs FET Switches and Attenuators

V 2.00

DR65-0008

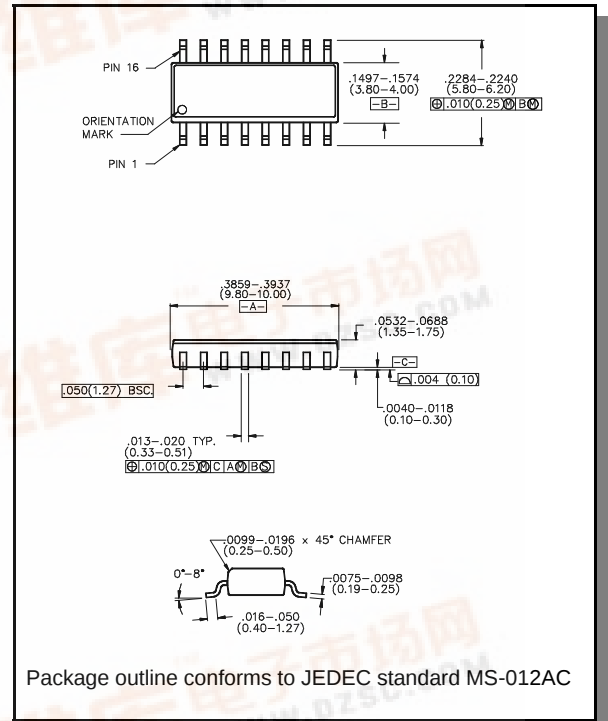
Features

- High Speed CMOS Technology
- Complementary Positive Voltage Outputs for driving series and shunt FETS
- TTL Inputs
- Low Power Dissipation
- Plastic SOIC Package for SMT Applications
- Tape and Reel Packaging Available
- Low Output Impedance for Driving Capacitive Circuits

Description

M/A-COM's DR65-0008 is a Quad channel driver used to translate TTL control inputs into gate voltages for Positive Voltage, GaAs FET microwave switches and attenuators. High speed analog CMOS technology is utilized to achieve low power dissipation at moderate to high speeds, encompassing most microwave switching applications.

SO-16



Guaranteed Operating Ranges

Parameter	Test Conditions ¹	Units	Min	Typ	Max
V _{CC}	Positive DC Supply Voltage	V	4.5	5.0	5.5
T _A	Operating Ambient Temperature	°C	-40	+25	+85
I _{OH}	DC Output Current - Source	mA	30	—	—
I _{OL}	DC Output Current - Sink	mA	-30	—	—
Trise, Tfall	Maximum Input Rise or Fall Time	nS	—	—	500

1. All voltages are relative to GND

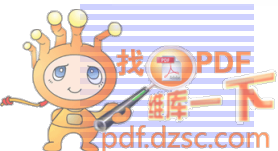
Absolute Maximum Ratings

Parameter	Absolute Maximum
V _{CC}	- .5V to + 6.0 V
V _{IN} ²	- .5V to V _{CC} + .5 V
V _{OUT}	0.0V to V _{CC}
Storage Temperature	-65°C to +150°C

Truth Table

Input	Outputs	
C_X	A_X	B_X
0	GND	V_{CC}
1	V_{CC}	GND

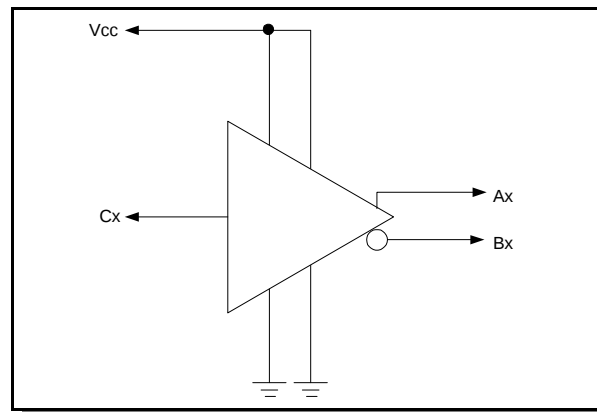
- Standard CMOS TTL interface, latch-up will occur if logic signal is applied prior to power supply.



Pin Configuration

PIN	Function	PIN	Function
1	A3	9	C2
2	B3	10	C1
3	A4	11	V _{CC}
4	B4	12	GND
5	GND	13	A1
6	V _{CC}	14	B1
7	C4	15	A2
8	C3	16	B2

Logic Diagram

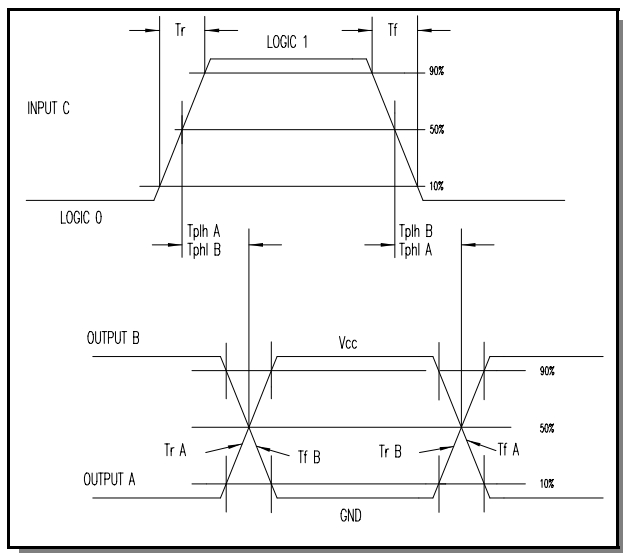


AC & DC Characteristics Over Guaranteed Operating Range

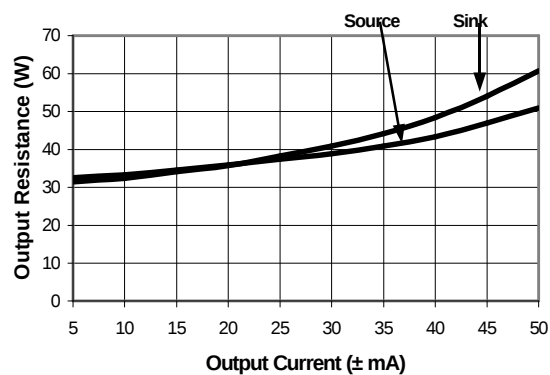
Symbol	Parameter	Test Conditions	Units	Min	Typ	Max
V _{IH}	Input HIGH Voltage	Guaranteed HIGH Input Voltage	V	2.0	—	—
V _{IL}	Input LOW Voltage	Guaranteed LOW Input Voltage	V	—	—	0.8
V _{OH}	Output HIGH Voltage	I _{OH} = 1 mA	V	V _{CC} - 0.1	—	—
V _{OL}	Output LOW Voltage	I _{OL} = -1 mA	V	—	—	.1
I _{IN}	Input Leakage Current	V _{IN} = V _{CC} or GND	μA	-10.0	0	+10.0
I _{CC}	Quiescent Supply Current	V _{CC} = Max	μA	—	—	400
ΔI _{CC}	Additional Supply Current, per TTL Input pin	V _{CC} = Max	mA	—	—	1.0
T _{PHL} , T _{PLH}	Propagation Delay	Guaranteed -40° C to +85° C	nS	—	30	50
T _{THL} , T _{TLH}	Output Transition Time	Guaranteed -40° C to +85° C	nS	—	10	25
T _{SKEW}	Delay Skew, Output A to Output B	Guaranteed -40° C to +85° C	nS	—	—	8
R _{out}	Output Resistance	I _O = ± 30 mA	Ω	—	40	—

See Switching Wave Forms for the definition of the switching terms.
V_{CC} must be by-passed with .01 μF Capacitors.
Unused inputs must be tied to Ground

Switching Waveforms



Output Impedance vs. Output Current



Ordering Information

Part Number	Package
DR65-0008	Bulk Packaging
DR65-0008-TR	Tape & Reel (1K Reel)

Specifications subject to change without notice.

- North America: Tel. (800) 366-2266
- Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020