

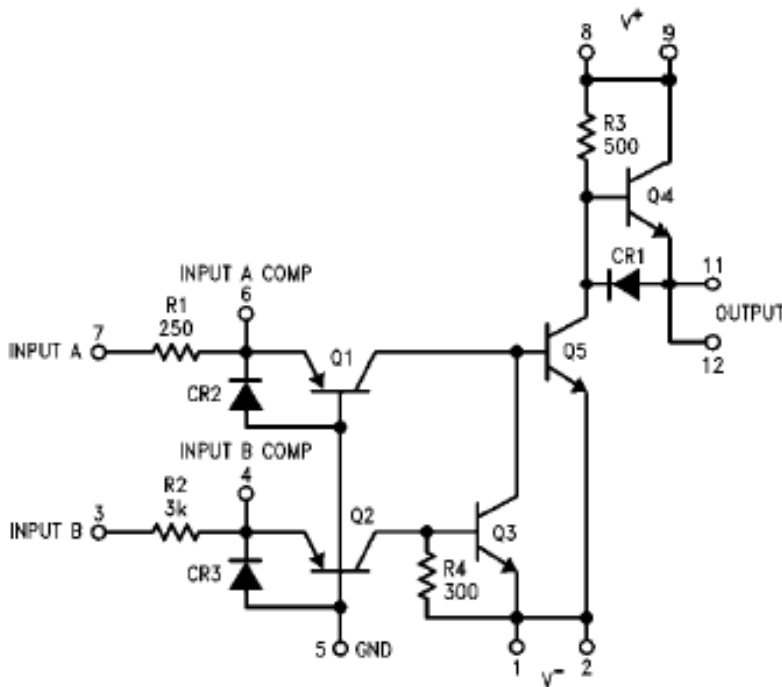
GENERAL DESCRIPTION

The MDU100N100H12B is a high speed differential driver designed to drive PIN diode switches in RF modulators and switches. The driver is compatible with CMOS and TTL logic and has a single inverting channel with +/- 10V and up to +/-400mA output.

FEATURES

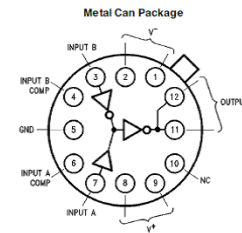
- High PRR 5 MHz
- Large output voltage 30V
- Peak output current in excess of 1A
- Direct replacement for DH0035/DH0035C
- 883 Screening

FUNCTION BLOCK DIAGRAM



MECHANICAL

The MDU100N100H12B is composed of silicon discrete BJT's mounted to a thin film substrate with integral TaN resistors. Package is TO-12 hermetic glass metal construction designed for good thermal footprint at high current ideal for integration into microwave assembly which operates in harsh environments of high temperature and vibration.



PIN CONNECTIONS

- 1 Vneg
- 2 Vneg
- 3 Input B
- 4 Input B Comp
- 5 Ground
- 6 Input A Comp
- 7 Input A
- 8 Vpos
- 9 Vpos
- 10 NC
- 11 Output
- 12 Output

TRUTH TABLE

INA	INB	OUT
0	1	+mA
1	0	-mA

ELECTRICAL SPECIFICATIONS

$V_{pos} +10V$, $V_{neg} -10V$, TEMP 25C, PRR .5MHz

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ABSOLUTE MAXIMUMS						
V_{pos}	Supply Voltage Positive Differential		0		+30	V
V_{neg}	Supply Voltage Negative Differential				-40	V
T_o	Operating Temperature		-54		+100	Deg C
T_s	Storage Temperature		-65		+125	Deg C
ENVIRONMENTAL						
Enviro	Temperature Range		-55		+125C	Deg C
INPUT						
V_{I_hi}	Voltage Input High	TTL	2.4	1.0	2.0	V
V_{I_low}	Voltage Input Low	TTL	.4	.6		V
OUTPUT						
VO_hi	Positive Output Swing	I out = 100mA	+7	+8		V
VO_low	Negative Output Swing	I out = 100mA		-8	-7	V
ISC_pos	Short Circuit Positive		400	800		mA
ISC_neg	Short Circuit Negative		800	1000		mA
lopk	Current Peak Output	sink			3	A
DYNAMIC						
Td_rise	Delay Rise			15	30	nS
Td_fall	Delay Fall			10	15	nS
TSW_rise	Switching Speed Rise	330pF load		12		nS
TSW_fall	Switching Speed Fall	330pF load		12		nS
PRR	Pulse Repetition Rate	Max, 10pF load		3	5	MHz

MECHANICAL SPECIFICATIONS

DRAWING NOT TO SCALE. DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

Type: Housing; Lead Finish: Gold

Width .555 Diameter in TYP Height .160 in TYP

MARKING SPECIFICATIONS

Part Number: 8M64H

Date Code: YYWW

