

ECL PULSE WIDTH GENERATORS

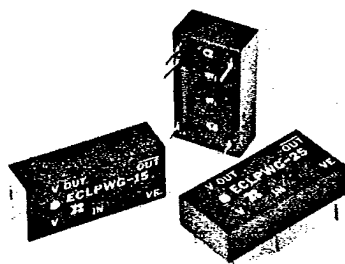
7724920 RHOMBUS INDUSTRIES INC

66C 00102 D 7-5/-19

The "DIP SERIES" ECL Pulse Width Generators offered by Rhombus Industries Inc. have been developed to provide a precise output pulse width dependent only on the occurrence of a positive step at the input. It is only necessary for the input step to be held stable for at least 10.0 nanoseconds, after which time the duration and negative going transition are of no consequence. All required drive and pick off circuitry along with the necessary timing components are contained in a single 16 pin "DIP" package. These modules have been designed for use with ECL 10K Integrated circuits and require only a proper emitter pull down resistor at the outputs to achieve the required pulse width.

The ECLPWG is offered in pulse widths from 5ns to 100ns. Each module will provide a positive as well as negative pulse of the specified width for each positive going input transition. Pulse width tolerance is maintained at $\pm 5\%$ or 2ns (whichever is greater) when measured between the -1.3 volt level on both the leading and trailing edge. Either output is capable of driving up to 70 ECL loads.

These modules are designed to meet or exceed all applicable environmental requirements of MIL-D-23859, MIL-STD-883 and MIL-STD-202.



OPERATING SPECIFICATIONS

Supply Voltage:	-5.2 VDC to Vee
Logic "1" Input:	
Voltage	- .98v min.
Current	265 μ a max.
Logic "0" Input:	
Voltage	-1.63v max.
Current	.5 μ a min.
Logic "1" Output:	
Voltage	- .96v min.
Logic "0" Output:	
Voltage	-1.650v max.
Operating temperature range	0° to 70°C
Storage temperature range	-55° to +125°C
Rise and Fall Time ²	3ns typ.

TEST CONDITIONS

Input Pulse Width:	10ns
Input Pulse Rise Time:	2ns
Input Pulse Voltage:	1.0v (-.75vH to -1.75vL)
Vee Supply Voltage:	-5.2vdc

ELECTRICAL SPECIFICATIONS AT 25°C

PART NUMBER	PULSE WIDTH ¹	MAX PULSE RATE
ECLPWG-5	5ns	100MHZ
ECLPWG-10	10ns	50MHZ
ECLPWG-15	15ns	33MHZ
ECLPWG-20	20ns	25MHZ
ECLPWG-25	25ns	20MHZ
ECLPWG-30	30ns	16MHZ
ECLPWG-35	35ns	14MHZ
ECLPWG-40	40ns	12MHZ
ECLPWG-45	45ns	11MHZ
ECLPWG-50	50ns	10MHZ
ECLPWG-60	60ns	8.4MHZ
ECLPWG-70	70ns	7.1MHZ
ECLPWG-80	80ns	6.3MHZ
ECLPWG-90	90ns	5.5MHZ
ECLPWG-100	100ns	5.0MHZ

¹ Measured @ -1.3v levels

² Measured from 20% to 80% points

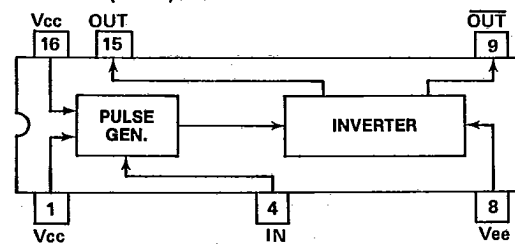
³ Output terminated through 100 ohms to -2.0 VDC

Factory orders should include complete 2 part type number as explained below:

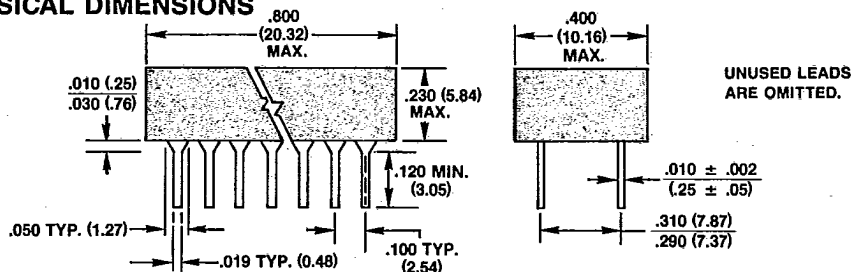
ECLPWG - XXX
ECL Pulse Width Generator
Pulse Width Required in ns.

BLOCK DIAGRAMS WITH PINOUTS

WHITE DOT (NOTCH) DENOTES PIN 1.



PHYSICAL DIMENSIONS



UNUSED LEADS ARE OMITTED.

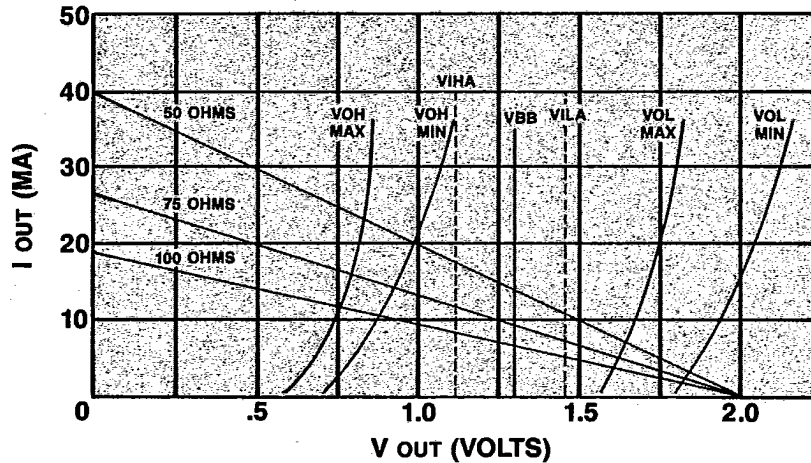
ECL OUTPUT VOLTAGE vs DC LOADING

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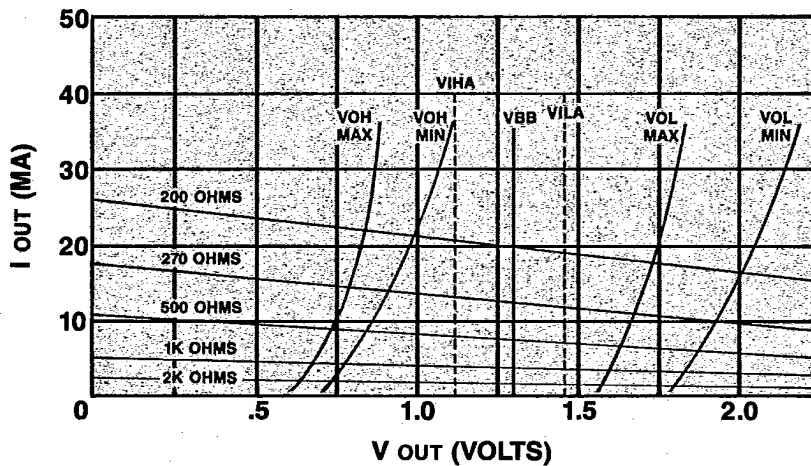
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LOAD LINES FOR TERM. TO -2.0 VDC



LOAD LINES FOR TERM. TO Vee (-5.2 VDC)



NOTE: INPUT PULLDOWN RESISTOR VALUES ARE TYPICALLY 50K OHMS AND SHOULD NOT BE USED AS PULLDOWN RESISTORS FOR PRECEDING OPEN - EMITTER OUTPUTS.

ALL DATA SUBJECT TO CHANGE WITHOUT NOTICE.