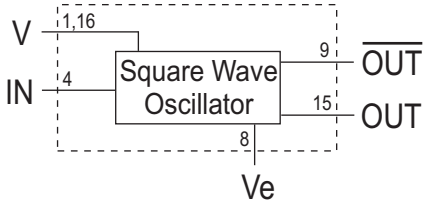
10K ECL Square Wave Generator Module

The 10K ECL Square Wave Generator Modules manufactured by Engineered Components Company are designed to provide a square wave output at a given frequency. These generators are both keyable and synchronizable, producing a continuous output train as long as an ECL "low" is applied to the input. With an ECL "high" applied to the input, the output will produce a constant ECL "high". When the input switches to "low", the output goes "low" one half-cycle later and continues to output a continuous square wave output. When the input switches back to "high", the output will be forced to a "high" one half-cycle later. An inverted output is also supplied.

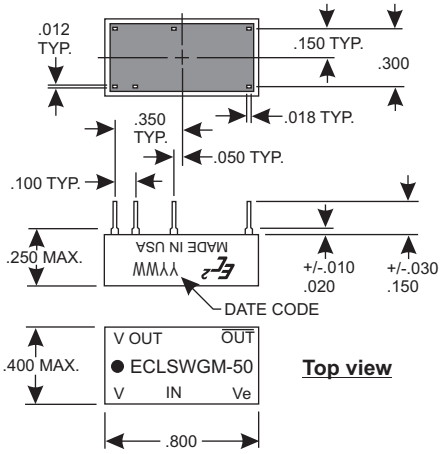
The MTBF on these modules, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 1.5 million hours. The temperature coefficient of delay is less than +/-200 ppm/deg.C over the operating temperature range of -30 to +85 deg. C.

The module is provided in a 16-pin DIP package, fully encapsulated in epoxy resin and is housed in a Diallyl Phthalate case, blue in color. The case marking is applied by silkscreen using white epoxy paint. The 6 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

BLOCK DIAGRAM



MECHANICAL DIAGRAM



Product Selection Table

Part Number	Nominal Output Frequency	Output Frequency Tolerance
ECLSWGM-2	2.0 MHz	+/-2%
ECLSWGM-2.5	2.5 MHz	+/-2%
ECLSWGM-3	3.0 MHz	+/-2%
ECLSWGM-3.5	3.5 MHz	+/-2%
ECLSWGM-4	4.0 MHz	+/-2%
ECLSWGM-4.5	4.5 MHz	+/-2%
ECLSWGM-5	5.0 MHz	+/-2%
ECLSWGM-5.5	5.5 MHz	+/-2%
ECLSWGM-6	6.0 MHz	+/-2%
ECLSWGM-7	7.0 MHz	+/-2%
ECLSWGM-8	8.0 MHz	+/-2%
ECLSWGM-9	9.0 MHz	+/-2%
ECLSWGM-10	10.0 MHz	+/-2%
ECLSWGM-11	11.0 MHz	+/-2%
ECLSWGM-12	12.0 MHz	+/-2%
ECLSWGM-13	13.0 MHz	+/-2%
ECLSWGM-14	14.0 MHz	+/-2%
ECLSWGM-15	15.0 MHz	+/-2%
ECLSWGM-20	20.0 MHz	+/-2%
ECLSWGM-25	25.0 MHz	+/-2%
ECLSWGM-30	30.0 MHz	+/-2%
ECLSWGM-35	35.0 MHz	+/-2%
ECLSWGM-40	40.0 MHz	+/-2%
ECLSWGM-45	45.0 MHz	+/-2%
ECLSWGM-50	50.0 MHz	+/-2%
ECLSWGM-60	60.0 MHz	+/-2%
ECLSWGM-70	70.0 MHz	+/-2%
ECLSWGM-80	80.0 MHz	+/-2%
ECLSWGM-90	90.0 MHz	+/-2%
ECLSWGM-100	100.0 MHz	+/-2%

Special modules can often be manufactured to provide for customer specific applications.

Operating Specifications:

All measurements made at 25 deg. C
All measurements made with Vee = -5.2VDC, Vcc = 0VDC
All measurements made with (1) 10K ECL output load
All measurements made with a 100 ohm pulldown resistor to -2VDC at the input and output

Operating Temperature: -30 to +85 deg. C
Storage Temperature: -55 to +125 deg. C

Vee Supply Voltage: -5.2 +/-5% VDC
Vee Supply Current: 55mA typical
Logic "High" Input:
Voltage: -0.98VDC min.
Current: 265uA max.
Logic "Low" Input:
Voltage: -1.63VDC max.
Current: 0.5uA min.
Logic "High" Voltage Out: -0.96VDC min.
Logic "Low" Voltage Out: -1.65VDC max.

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