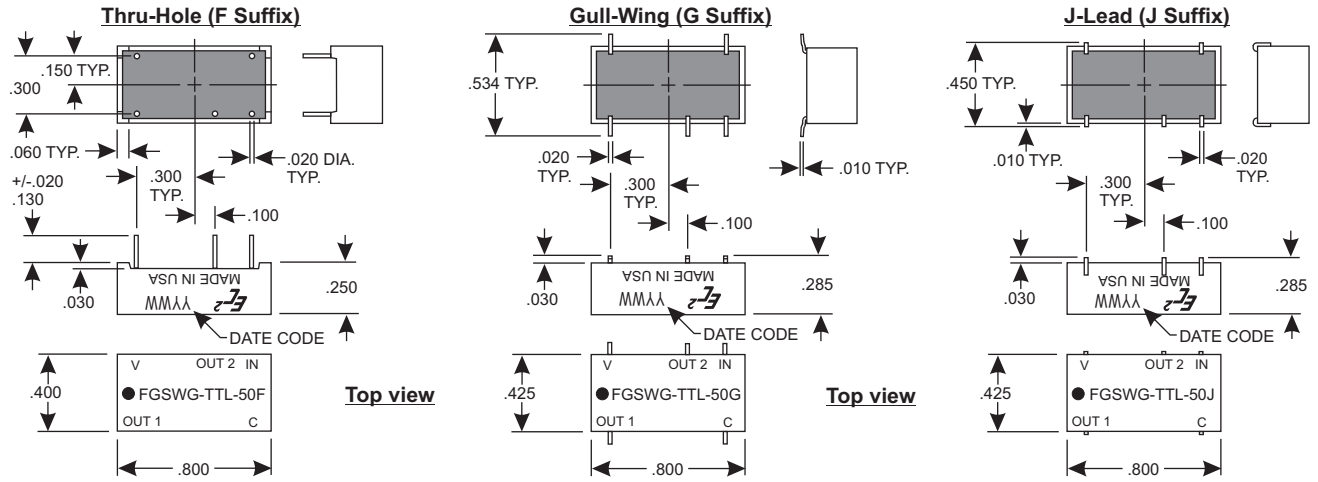
FAST TTL Gated Square Wave Generator

The FAST TTL Gated Square Wave Generators 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 a TTL "low" is applied to the input. With a TTL "high" applied to the input, output 1 will produce a constant "high" and output 2 will produce a constant "low". When the input switches to "low", output 2 goes "high" immediately. Output 1 and output 2 both go low after one half-cycle and then run in phase as a continuous square wave output. When the input switches back to "high", output 2 goes "low" immediately and output 1 goes "high" one half-cycle later.

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 5 million hours. The temperature coefficient of delay is less than 500 ppm/deg.C over the operating temperature range of 0 to +70 deg. C.

The module is provided in a 14-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 5 copper leads are tin-lead plated and meet the solderability requirements of MIL-STD-202, Method 208.

MECHANICAL DIAGRAM



Product Selection Table

(Add F Suffix for Thru-Hole Leads, G Suffix for Gull-Wing Leads, or J Suffix for J-Leads)

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

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

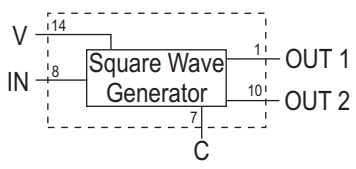
Operating Specifications:

All measurements made at 25 deg. C
All measurements made with Vcc = +5VDC
All measurements made with (1) FAST TTL output load

Operating Temperature: 0 to +70 deg. C
Storage Temperature: -55 to +125 deg. C

Vcc Supply Voltage: 4.75 to 5.25VDC
Vcc Supply Current:
FGSWG-TTL-2X = 20mA typical
FGSWG-TTL-100X = 30mA typical
Logic "High" Input:
Voltage: 2.0VDC min. ; Vcc max.
Current: 2.7VDC = 40uA max. ; 5.5VDC = 2mA max.
Logic "Low" Input:
Voltage: 0.8 VDC max.
Current: -1.2mA max.
Logic "High" Voltage Out: 2.7VDC min.
Logic "Low" Voltage Out: 0.5VDC max.

BLOCK DIAGRAM



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