

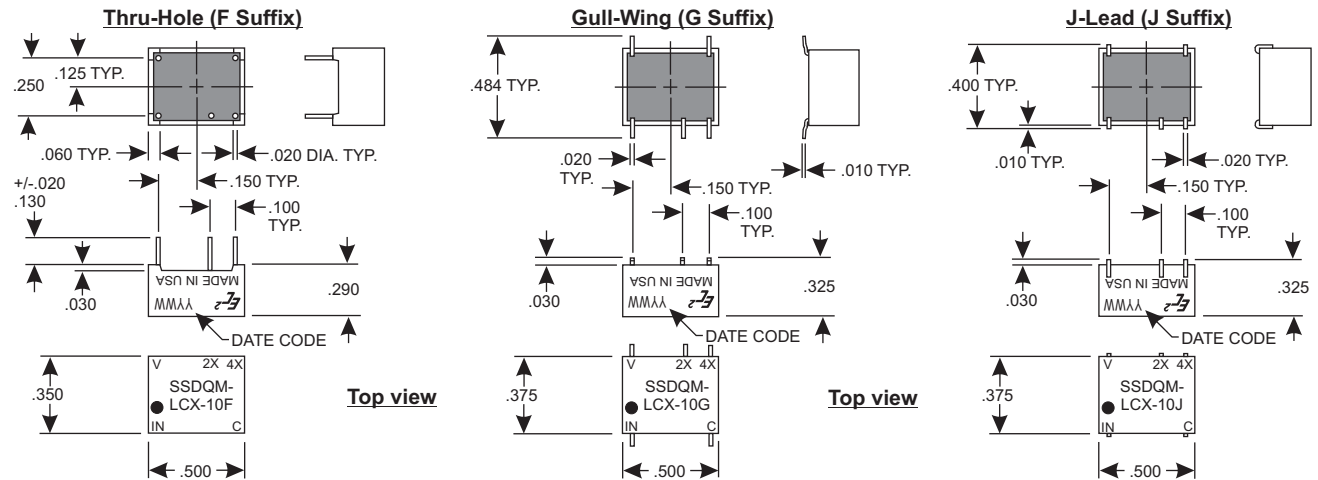
Space Saver LCX 3V Doubler/Quadrupler Module

The Space Saver LCX 3V Doubler/Quadrupler Modules manufactured by Engineered Components Company are designed to provide precise 3V wavetrain outputs at two times (2X) and four times (4X) the input frequency. The input squarewave is multiplied by the module producing 2X and 4X outputs. The multiplication is accomplished by inserting timed edges and any variance in this timing will result in jitter on the output waveforms.

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 3.7 million hours. The temperature coefficient of delay is less than 600 ppm/deg.C over the operating temperature range of -40 to +85 deg. C.

The module is provided in a 8-pin Space Saver 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	Input Frequency	2X Output	4X Output
SSDQM-LCX-2.0	2.0	4.0	8.0
SSDQM-LCX-2.5	2.5	5.0	10.0
SSDQM-LCX-3.0	3.0	6.0	12.0
SSDQM-LCX-3.57	3.6	7.2	14.3
SSDQM-LCX-4.0	4.0	8.0	16.0
SSDQM-LCX-4.77	4.8	9.5	19.1
SSDQM-LCX-5.0	5.0	10.0	20.0
SSDQM-LCX-6.0	6.0	12.0	24.0
SSDQM-LCX-7.0	7.0	14.0	28.0
SSDQM-LCX-7.15	7.2	14.3	28.6
SSDQM-LCX-8.0	8.0	16.0	32.0
SSDQM-LCX-8.33	8.3	16.7	33.3
SSDQM-LCX-9.0	9.0	18.0	36.0
SSDQM-LCX-10	10.0	20.0	40.0
SSDQM-LCX-12	12.0	24.0	48.0
SSDQM-LCX-12.28	12.3	24.6	49.1
SSDQM-LCX-14.32	14.3	28.6	57.3
SSDQM-LCX-14.85	14.9	29.7	59.4
SSDQM-LCX-15	15.0	30.0	60.0
SSDQM-LCX-16	16.0	32.0	64.0
SSDQM-LCX-17	17.0	34.0	68.0
SSDQM-LCX-18	18.0	36.0	72.0
SSDQM-LCX-19	19.0	38.0	76.0
SSDQM-LCX-19.68	19.7	39.4	78.7
SSDQM-LCX-20	20.0	40.0	80.0

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 = +3.3VDC
 All measurements made with (1) LCX output load

Operating Temperature: -40 to +85 deg. C
 Storage Temperature: -55 to +125 deg. C

Vcc Supply Voltage: 2.70 to 3.60VDC

Vcc Supply Current:

SSDQM-LCX-2X = 14mA typical

SSDQM-LCX-20X = 22mA typical

Logic "High" Input:

Voltage: 2.0VDC min.; Vcc max.

Current: Vcc max.; +/-5uA max.

Logic "Low" Input:

Voltage: 0.8 VDC max.

Current: +/-5uA max.

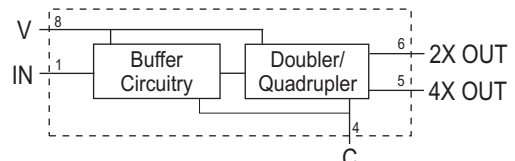
Logic "High" Voltage Out: 2.2VDC min.

Current Out: -24mA

Logic "Low" Voltage Out: 0.55VDC max.

Current Out: +24mA

BLOCK DIAGRAM



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