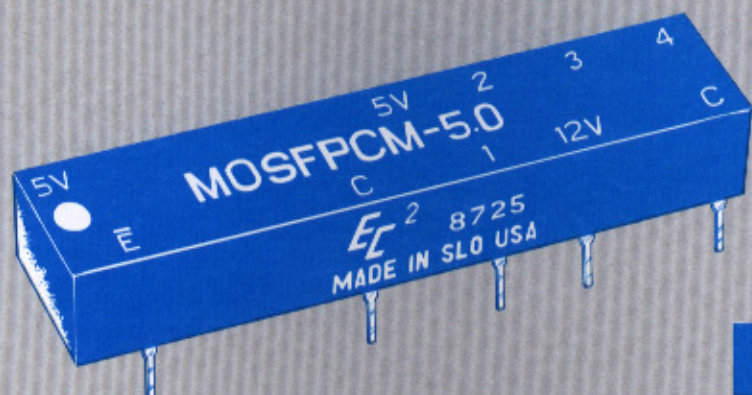


# EC<sup>2</sup>



*low profile*

## MOS

### COMPATIBLE

# FOUR-PHASE CLOCK MODULE

- TTL input and 12V MOS output
- 20% time slots result in non-overlapping phases
- 30-pin DIP package (.300 high)
- Available in frequencies from 500 KHz to 15 Mhz

tained to an accuracy of  $\pm 5^\circ$ . Output phase times are referenced to the +3.0V level on the rising edge.

## design notes

The "DIP Series" Four Phase Clock Modules developed by Engineered Components Company have been designed to provide precise 12V, four-phase, 20% duty cycle outputs at frequencies from 500 KHz to 15 Mhz.

The MOSFPCM is offered in twenty-four (24) standard clock frequencies from 500 KHz to 15 Mhz. When tested under the "Test Conditions" shown, output frequency is maintained to within 0.5% of nominal frequency; output phase spacing is main-

These modules are of hybrid construction utilizing the proven technologies of active integrated circuitry and of passive networks utilizing capacitive, inductive and resistive elements. The ICs utilized in these modules are burned-in to Level B of MIL-STD-883 to ensure a high MTBF. The MTBF on these modules, when calculated per MIL-HDBK-217 for a 50°C ground fixed environment is in excess of 750,000 hours.

These "DIP Series" modules are packaged in a 30-pin DIP housing, molded of flame-proof Diallyl Phthalate per MIL-M-14, Type SDG-F, and are fully encapsulated in epoxy resin. Flat metal leads meet the solderability requirements of MIL-STD-202, Method 208. Leads provide positive standoff from the printed circuit board to permit solder-fillet formation and flush cleaning of solder-flux residues for improved reliability.

# EC<sup>2</sup>

## engineered components company

3580 Sacramento Drive, P. O. Box 8121, San Luis Obispo, CA 93403-8121

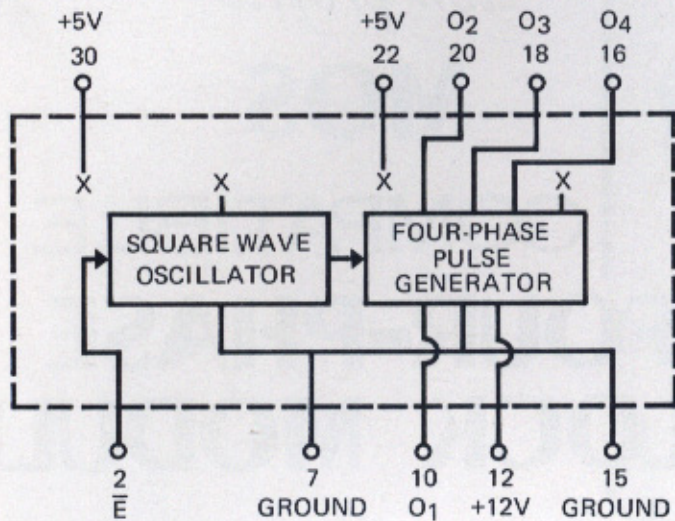
Phone: (805) 544-3800



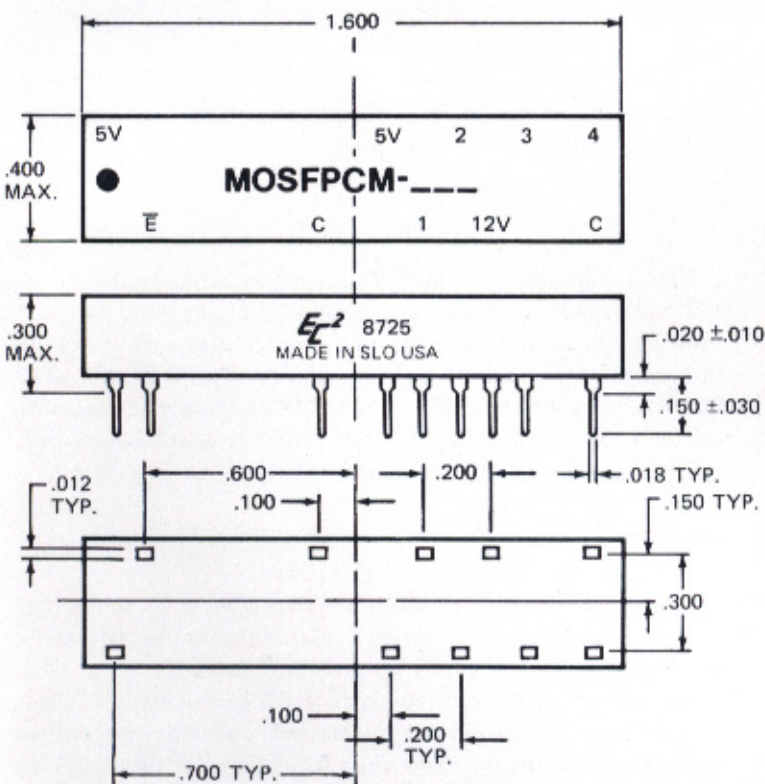
## DESIGN NOTES (continued)

Marking consists of manufacturer's name, logo (EC<sup>2</sup>), part number, terminal identification and date code of manufacture. All marking is applied by silk screen process using white epoxy paint in accordance with MIL-STD-130, to meet the permanency of identification required by MIL-STD-202, Method 215.

### BLOCK DIAGRAM IS SHOWN BELOW



### MECHANICAL DETAIL IS SHOWN BELOW



## TEST CONDITIONS

1. All measurements are made at 25°C.
2. Vcc supply voltage is maintained at 5.0V DC.
3. Output supply voltage is maintained at 12.0V DC.
4. Output is tested under "no load" conditions.

## OPERATING SPECIFICATIONS

* Vcc supply voltage:	.....	4.75 to 5.25V DC
Vcc supply current:	.....	100ma typical
MOS supply voltage	.....	+12V DC
MOS supply current		
Running	.....	17ma typical
Disabled	.....	21ma typical
Drive capability:		
Source	.....	1ma max.
Sink	.....	6ma max.
Logic 1 Voltage out:	.....	10V min.
Logic 0 Voltage out:	.....	1V max.
Operating temperature range:	.....	0 to 70°C.
Storage temperature:	.....	-55 to +125°C.

\* Phase error increases approximately 2° for a respective increase or decrease of 5% in supply voltage.

## PART NUMBER TABLE

Part Number	Operating Frequency	Part Number	Operating Frequency
MOSFPCM-0.5	500 KHz	MOSFPCM-4.5	4.5 Mhz
MOSFPCM-0.6	600 KHz	MOSFPCM-5.0	5.0 Mhz
MOSFPCM-0.7	700 KHz	MOSFPCM-6.0	6.0 Mhz
MOSFPCM-0.8	800 KHz	MOSFPCM-7.0	7.0 Mhz
MOSFPCM-0.9	900 KHz	MOSFPCM-8.0	8.0 Mhz
MOSFPCM-1.0	1.0 Mhz	MOSFPCM-9.0	9.0 Mhz
MOSFPCM-1.5	1.5 Mhz	MOSFPCM-10.0	10.0 Mhz
MOSFPCM-2.0	2.0 Mhz	MOSFPCM-11.0	11.0 Mhz
MOSFPCM-2.5	2.5 Mhz	MOSFPCM-12.0	12.0 Mhz
MOSFPCM-3.0	3.0 Mhz	MOSFPCM-13.0	13.0 Mhz
MOSFPCM-3.5	3.5 Mhz	MOSFPCM-14.0	14.0 Mhz
MOSFPCM-4.0	4.0 Mhz	MOSFPCM-15.0	15.0 Mhz

Special modules can be readily manufactured to provide outputs with either higher or lower duty cycles, improve accuracies or to provide customer specified frequencies for specific applications.