

NEW



MODEL MD-401

DOUBLE BALANCED MIXER

RF, LO 0.2 - 400 MHz; IF, DC - 400 MHz

T-77-09

LO Power +7 dBm

Half Relay Header

MCL Model TFM-3 Replacement

Guaranteed Specifications*

(From -54°C to +85°C)

Frequency Range	RF, LO Ports		0.2 - 400 MHz
	IF Port		DC - 400 MHz
Conversion Loss	0.2 - 10 MHz		8.0 dB Max
	10 - 200		7.0 dB Max
	200 - 400 MHz		8.0 dB Max
Isolation	LO to RF	0.2 - 10 MHz	50 dB Min
		10 - 200 MHz	35 dB Min
		200 - 400 MHz	25 dB Min
	LO to IF	0.2 - 10 MHz	40 dB Min
		10 - 200 MHz	35 dB Min
		200 - 400 MHz	20 dB Min
	RF to IF	0.2 - 10 MHz	30 dB Min
		10 - 200 MHz	15 dB Min
		200 - 400 MHz	12 dB Min

Operating Characteristics

Impedance 50 Ohms Nominal

Maximum Input

Total Power	50 mW Max
IF Port Current	40 mA Max
DC Polarity	Neg
DC Offset	≤ 2.0 mV Typ

RF Input for 1dB Compression 0 dBm Typ

RF Input for 1 dB Desensitization -2.0 dBm Typ

SSB Noise Figure Within 1.0 dB of Conversion

Two-Tone IM Ratio

(with -10 dBm input, each tone and 50 & 60 MHz IF)	45 dB Typ at 160 MHz
	42 dB Typ at 400 MHz

Package Type

(RH-6)

(See page 473 for physical dimensions.)

Pin Configuration

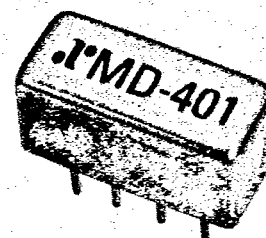
RF; P1, LO; P4, IF; P2
P3 = Case ground.

*All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.

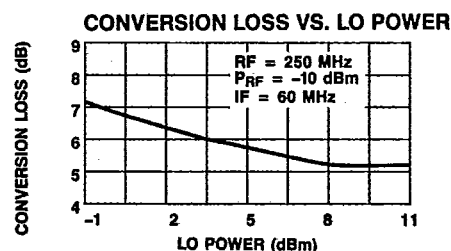
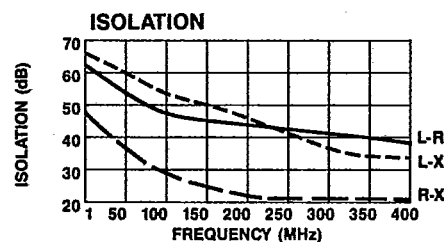
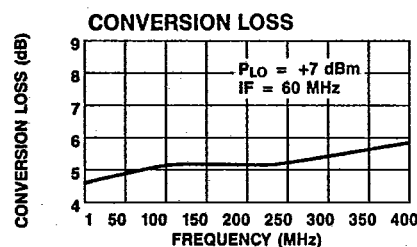
Ordering Information

Model No.	Connectors	Unit Price (1-24 Units)
MD-401	PIN	\$25.90

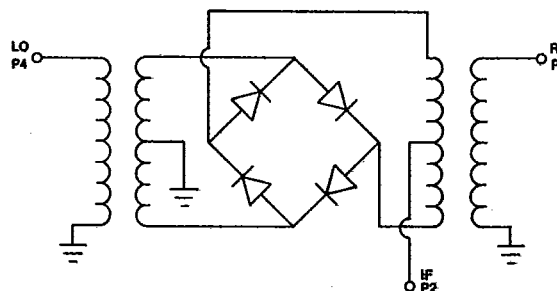
Delivery is from stock.



Typical Performance



Schematic



ANZAC

Make the Connection...

80 Cambridge Street, Burlington, MA 01803 Fax (617) 273-1921

Adams Russell

COMPONENTS GROUP

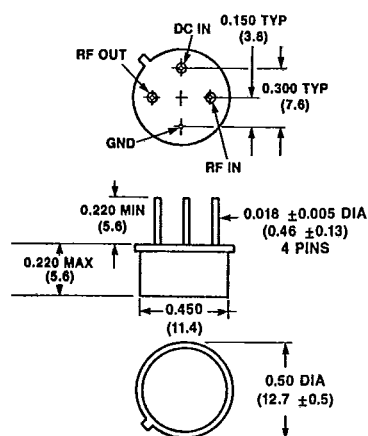
For Technical Information, Call (617) 273-3333

For Ordering Information, Call (617) 273-3333

MECHANICAL DATA

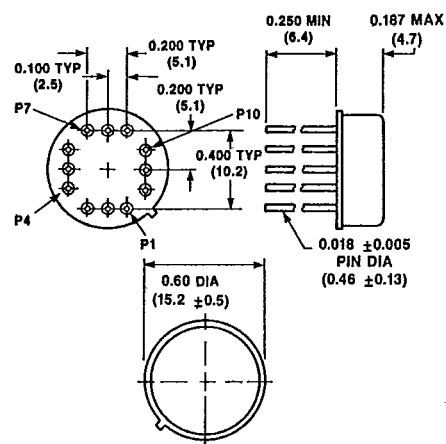
UNLESS OTHERWISE NOTED:
 .XXX = ± 0.010 , .XX = ± 0.020
 (.X = ± 0.3), (.XX = ± 0.6)
 DIMENSIONS IN () ARE IN MM.

TO-8-1



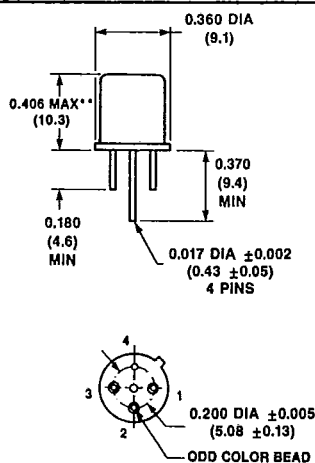
WEIGHT (APPROX.): 0.10 OUNCES 2.8 GRAMS

TO-8-2



WEIGHT (APPROX.): 0.11 OUNCES 3 GRAMS

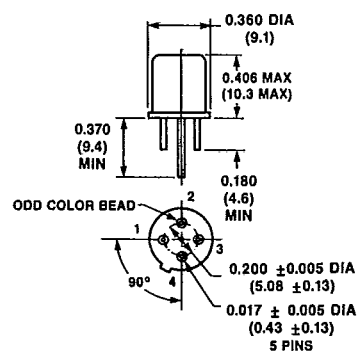
TO-5-1



**FOR MTH-50; 0.343"
 MAX FOR MTV-50
 (PIN 4 NOT ON ALL PACKAGES)

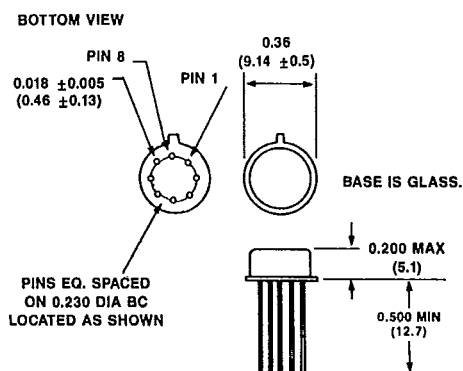
MOUNTING AREA: 0.1 SQ. IN. 0.6 SQ. CM.
 WEIGHT (APPROX.): 0.11 OUNCES 3 GRAMS

TO-5-2



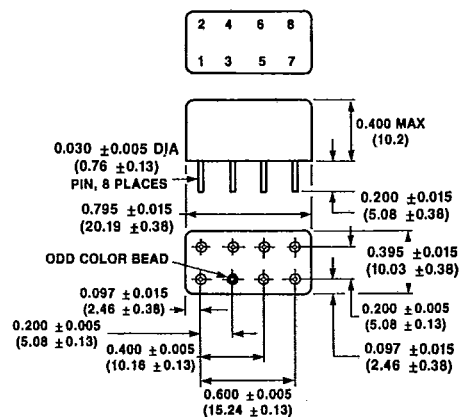
MOUNTING AREA: 0.1 SQ. IN. 0.6 SQ. CM.
 WEIGHT (APPROX.): 0.11 OUNCES 3 GRAMS

TO-5-3



WEIGHT (APPROX.): 0.025 OUNCES 0.7 GRAMS

RH-1



WEIGHT (APPROX.): 0.23 OUNCES 6.5 GRAMS

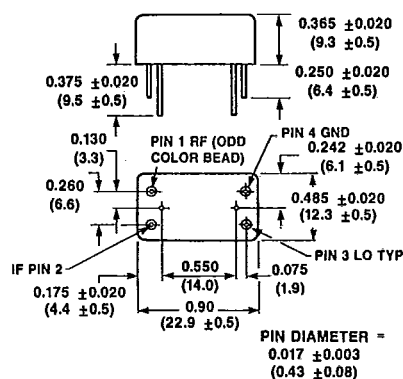
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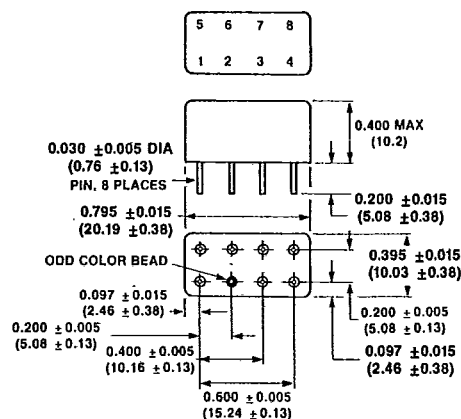
MECHANICAL DATA

RH-2



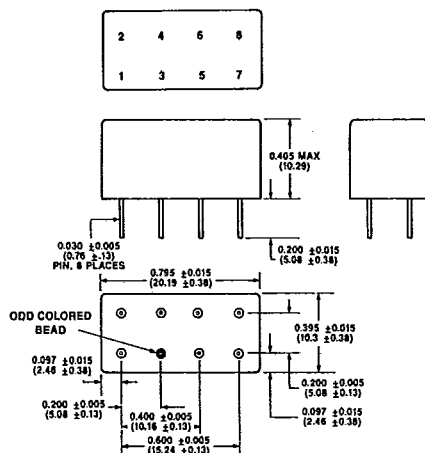
WEIGHT (APPROX.): 0.23 OUNCES 6.5 GRAMS

RH-3



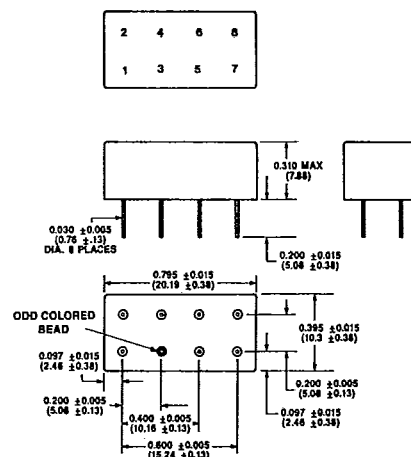
WEIGHT (APPROX.): 0.23 OUNCES 6.5 GRAMS

RH-4



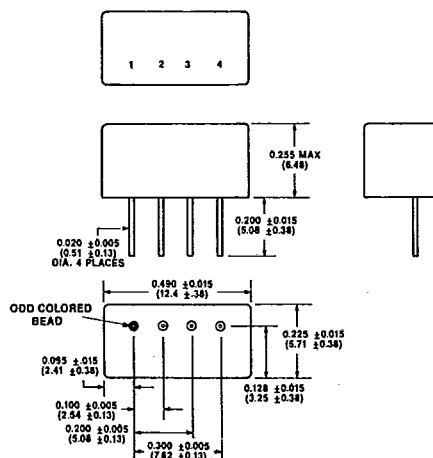
WEIGHT (APPROX.): 0.23 OUNCES 6.5 GRAMS

RH-5



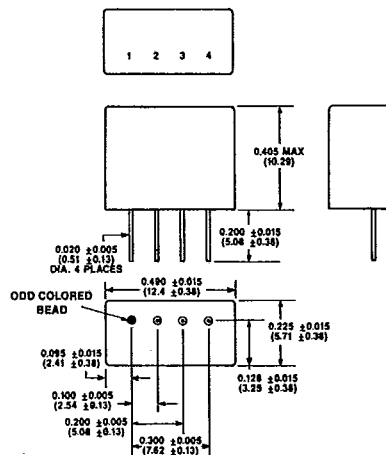
WEIGHT (APPROX.): 0.16 OUNCES 4.4 GRAMS

RH-6



WEIGHT (APPROX.): 0.05 OUNCES 1.5 GRAMS

RH-7

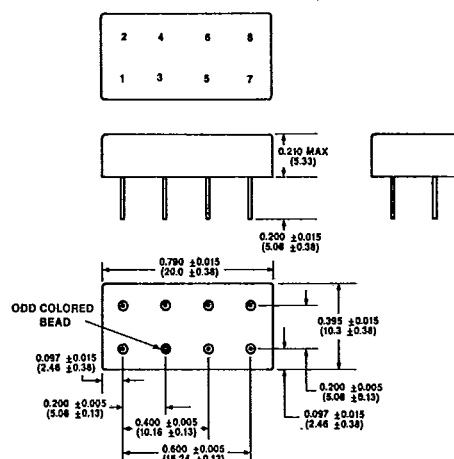


WEIGHT (APPROX.): 0.04 OUNCES 1.3 GRAMS

MECHANICAL DATA

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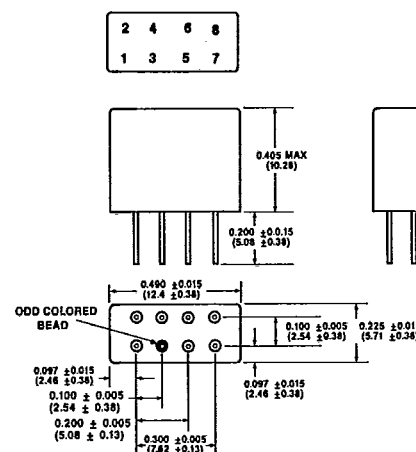
RH-8



WEIGHT (APPROX.): 0.13 OUNCES 3.5 GRAMS

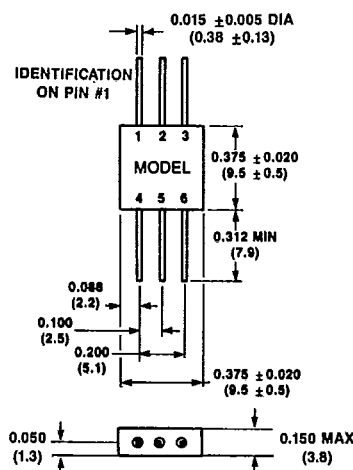
RH-9

T-90-20



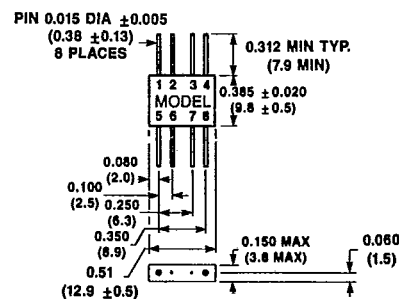
WEIGHT (APPROX.): 0.06 OUNCES 1.6 GRAMS

FP-1



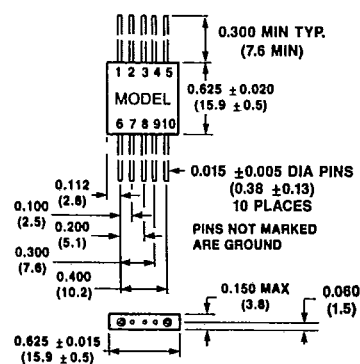
WEIGHT (APPROX.): 0.07 OUNCES 2 GRAMS

FP-2



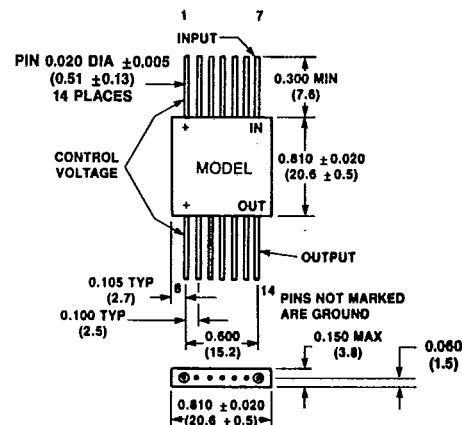
WEIGHT (APPROX.): 0.09 OUNCES 2.5 GRAMS

FP-3



WEIGHT (APPROX.): 0.12 OUNCES 3.4 GRAMS

FP-4



WEIGHT (APPROX.): 0.21 OUNCES 6 GRAMS

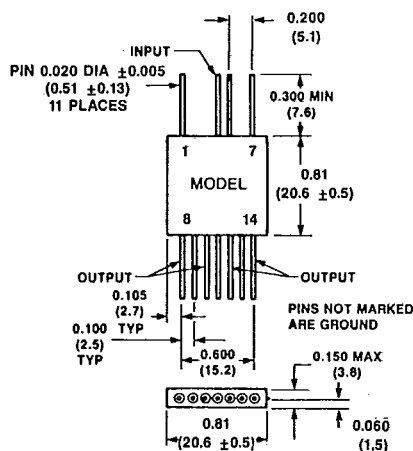
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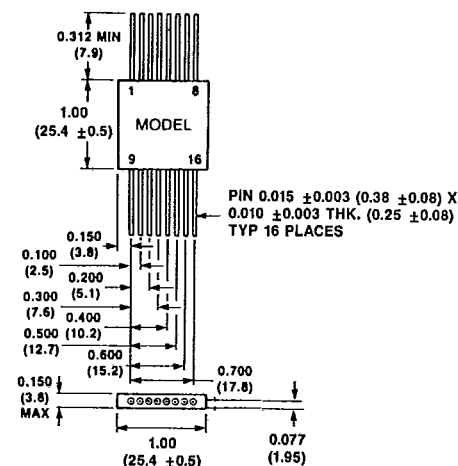
MECHANICAL DATA

FP-5



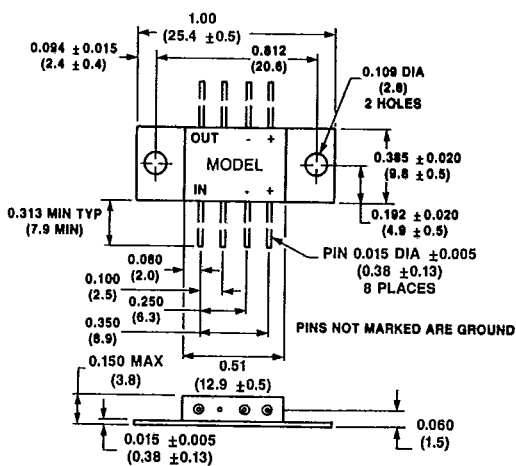
WEIGHT (APPROX.): 0.21 OUNCES 6 GRAMS

FP-6



WEIGHT (APPROX.): 0.24 OUNCES 6.8 GRAMS

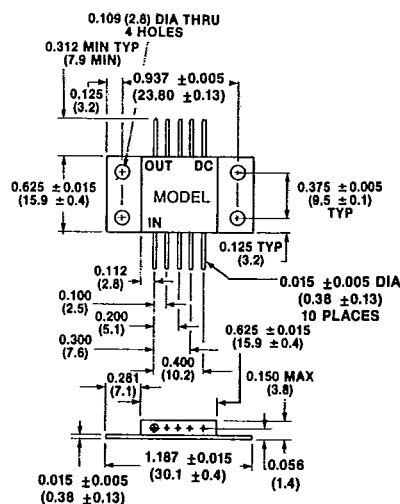
FP-7



(NOTE: AM-123 POSITIVE VOLTAGE ONLY.)

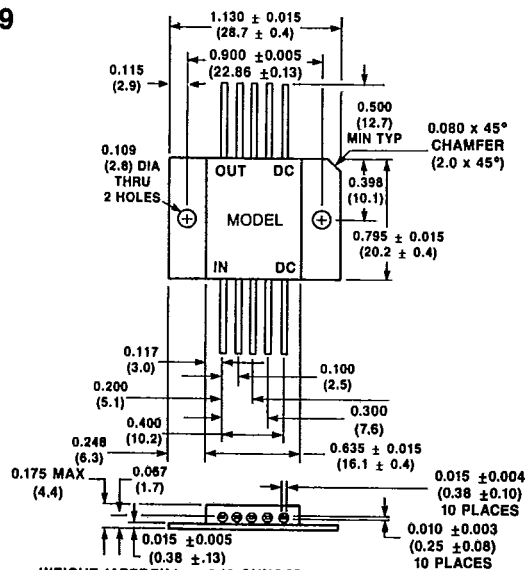
WEIGHT (APPROX.): 0.09 OUNCES 2.5 GRAMS

FP-8



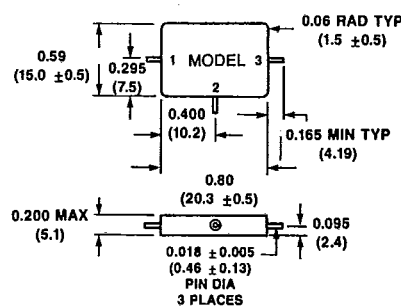
WEIGHT (APPROX.): 0.17 OUNCES 4.8 GRAMS

FP-9



WEIGHT (APPROX.): 0.18 OUNCES 5 GRAMS

FP-10

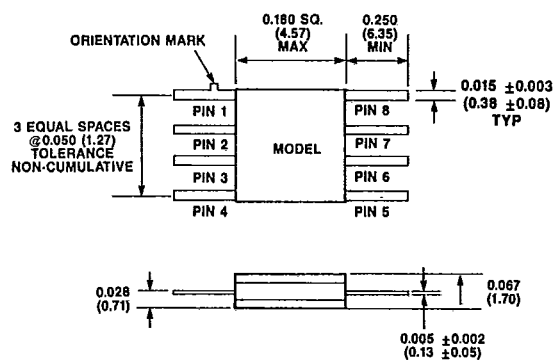


WEIGHT (APPROX.): 0.35 OUNCES 10 GRAMS

MECHANICAL DATA

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CR-3



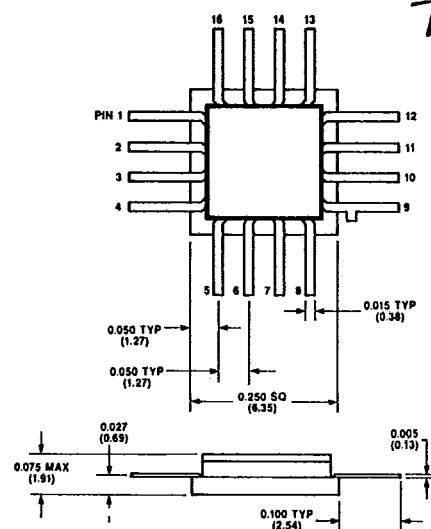
PIN CONFIGURATION

	RF	COM	RF1	RF2	A	B
SPST	N/A	8	5	2	3	
SPDT	1	3	6	4	5	

ALL OTHER PINS ARE GROUND.

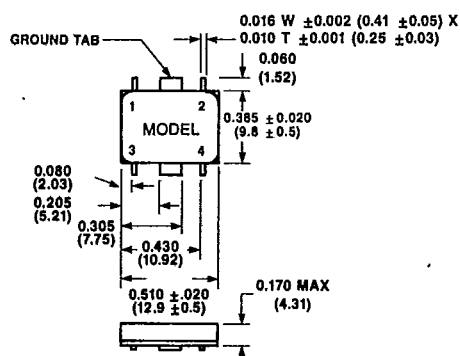
WEIGHT (APPROX): 0.007 OUNCES 0.2 GRAMS

CR-4



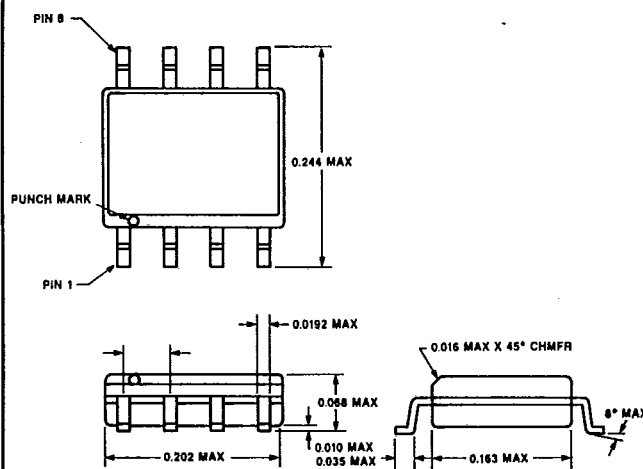
WEIGHT (APPROX): 0.01 OUNCE 0.3 GRAMS

SF-1



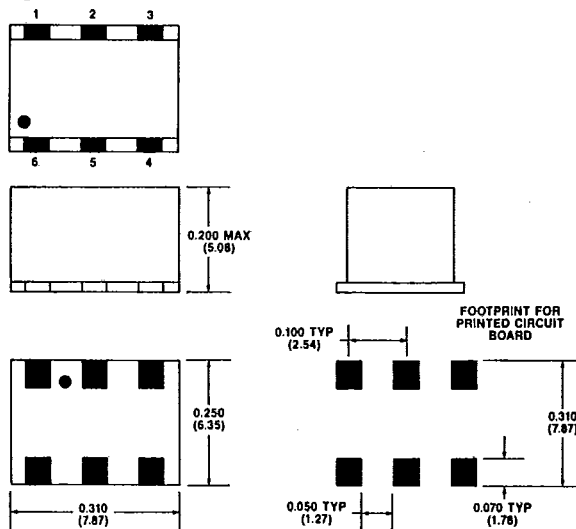
WEIGHT (APPROX): 0.07 OUNCES 2 GRAMS

SF-2



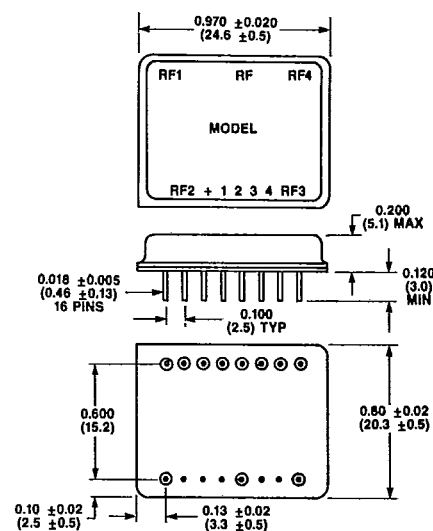
WEIGHT (APPROX.): 0.003 OUNCES 0.08 GRAMS

SF-3



WEIGHT (APPROX.): 0.011 OUNCES 0.31 GRAMS

DI-5



WEIGHT (APPROX.): 0.26 OUNCES 73 GRAMS