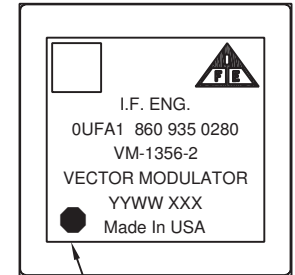
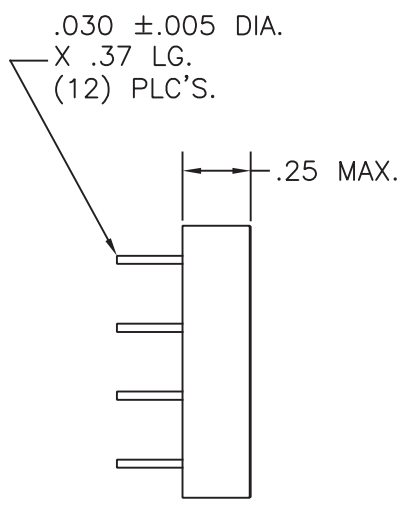
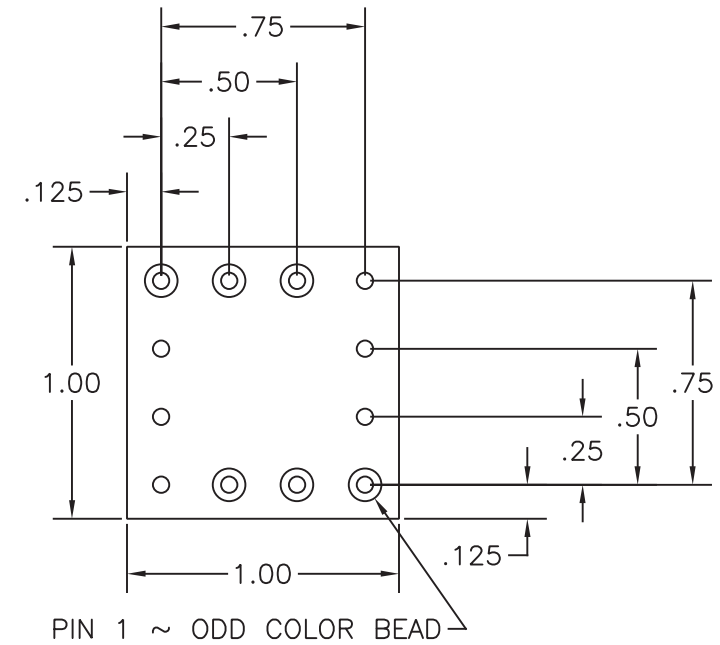


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| PIN NO. | FUNCTION |
|-------------------|-------------------|
| 1 | RF INPUT |
| 2 | Q CONTROL ±10V DC |
| 3 | -15.000 V DC BIAS |
| 7 | RF OUTPUT |
| 8 | +15.000 V DC BIAS |
| 9 | I CONTROL ±10V DC |
| 4,5,6,10 11,12 | GROUND |

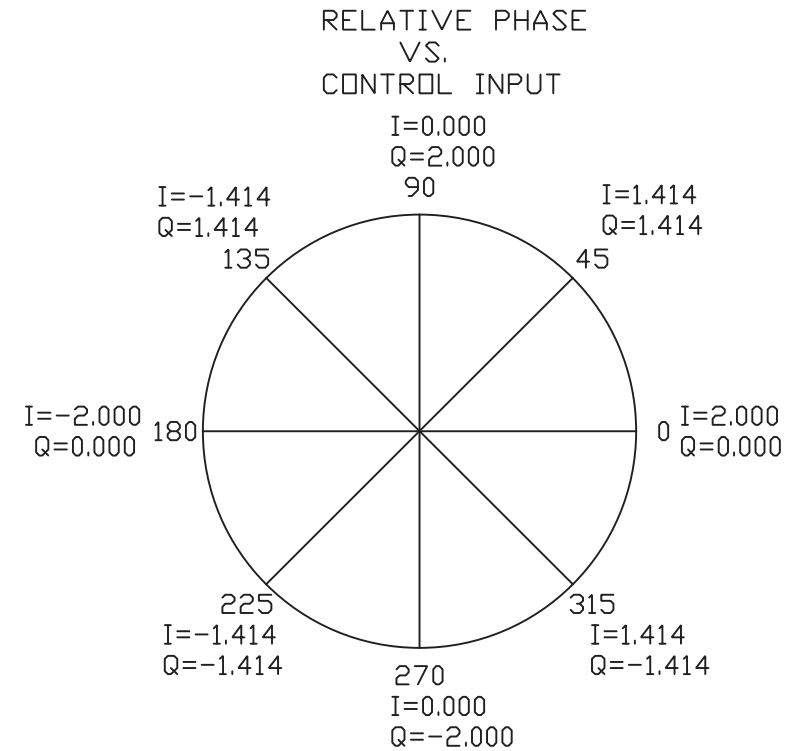
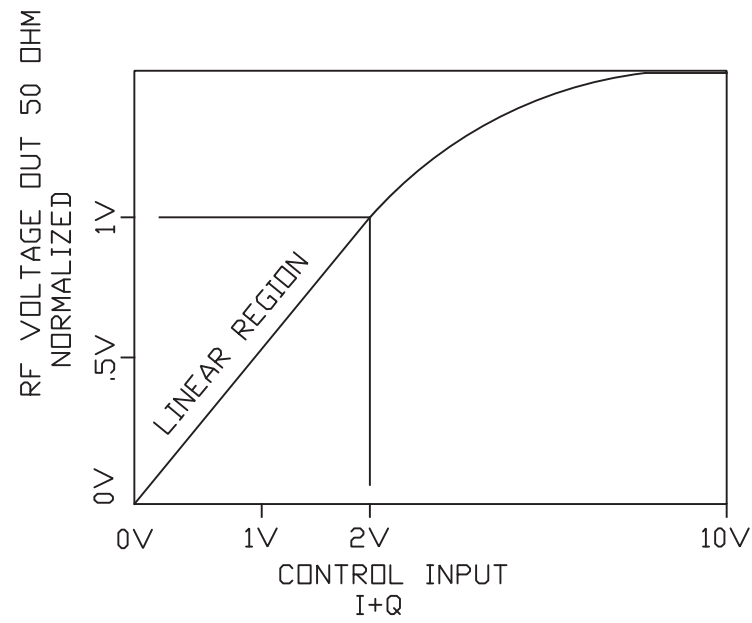
| REVISION | | | |
|----------|---------------|---------|--------|
| LTR. | DESCRIPTION | DATE | APPVL. |
| - | ENG. RELEASED | 8/14/19 | MJD |



PIN 1 INDICATOR

MODULATOR, COMPLEX PHASOR/VECTOR
ELECTRICAL SPECIFICATIONS

| | |
|----------------------------------|----------------------|
| FREQ. RANGE (MHz) | 13.56±100KHz |
| RF INPUT POWER (dBm) NOM. | 0 |
| INSERTION LOSS (dB) NOM. | |
| SATURATED $\sqrt{I^2+Q^2}=10V$ | 10 |
| LINEAR RANGE $\sqrt{I^2+Q^2}=2V$ | 15 |
| AMPLITUDE BALANCE (dB) MAX. | ±1.0 |
| $\sqrt{I^2+Q^2}=2V$ | |
| ATTENUATION RANGE (dB) | 0-40 |
| NULL DEPTH (dB) MIN | 50 |
| NULL OFFSET (mv) MAX. | 75 |
| PHASE ACCURACY (DEG) MAX. | ±4.0° |
| PHASE DEVIATION FROM 25°C | ±1.5° |
| NOMINAL CONDITION | $\sqrt{I^2+Q^2}=2V$ |
| BIAS VOLTAGES (VDC) | ±15.000 @ 25 ma MAX. |
| CONTROL PORT (DC COUPLED) | |
| FREQUENCY RANGE | DC-30 KHz |
| CONTROL RANGE MAX. | ±10V |
| LINEAR | ±2V @5ma dc max. |
| VSWR MAX. | 1.8:1 |
| IMPEDANCE (OHMS) | 50 |
| OPERATING TEMP. | +10 TO +45°C |



NOTES:

- MATERIAL:
HEADER, PINS & COVER: KOVAR
- FINISH:
HEADER & PINS: GOLD PLATE PER MIL-G-45204 TYPE 1, CLASS 1.
COVER: NICKEL PLATE PER QQ-N-290A3
- LABEL: WHERE XXXX IS DATECODE, YYY IS S/N
- SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE

| | | | |
|---|------------------------|---------|---------|
| | THIRD ANGLE PROJECTION | DRAWN | DATE |
| | | MJD | 1/22/19 |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS MEASURED IN INCHES DRAWING PRACTICES PER ASME Y14.100 | ENGRG APPD | DATE | |
| | AM | 8/14/19 | |
| TOLERANCES ANGLES ±1/2° .XX ±.01 .XXX ±.005 | MFG APPD | DATE | |
| | JU | 8/14/19 | |
| MATERIAL: SEE NOTE 1 | QA APPD | DATE | |
| | EJS | 8/14/19 | |
| FINISH: SEE NOTE 2 | RELEASED | DATE | |
| | MJD | 8/14/19 | |

I.F.E. ENGINEERING
3 FOSHAY ROAD, DUDLEY MA 01571

TITLE
OUTLINE DRAWING
VM-1356-2

| | | | |
|-------|----------------|-------------|--------|
| SIZE | CODE IDENT NO. | DRAWING NO. | REV. |
| B | OUF A1 | 350-046-181 | - |
| SCALE | N/A | SHEET | 1 OF 1 |