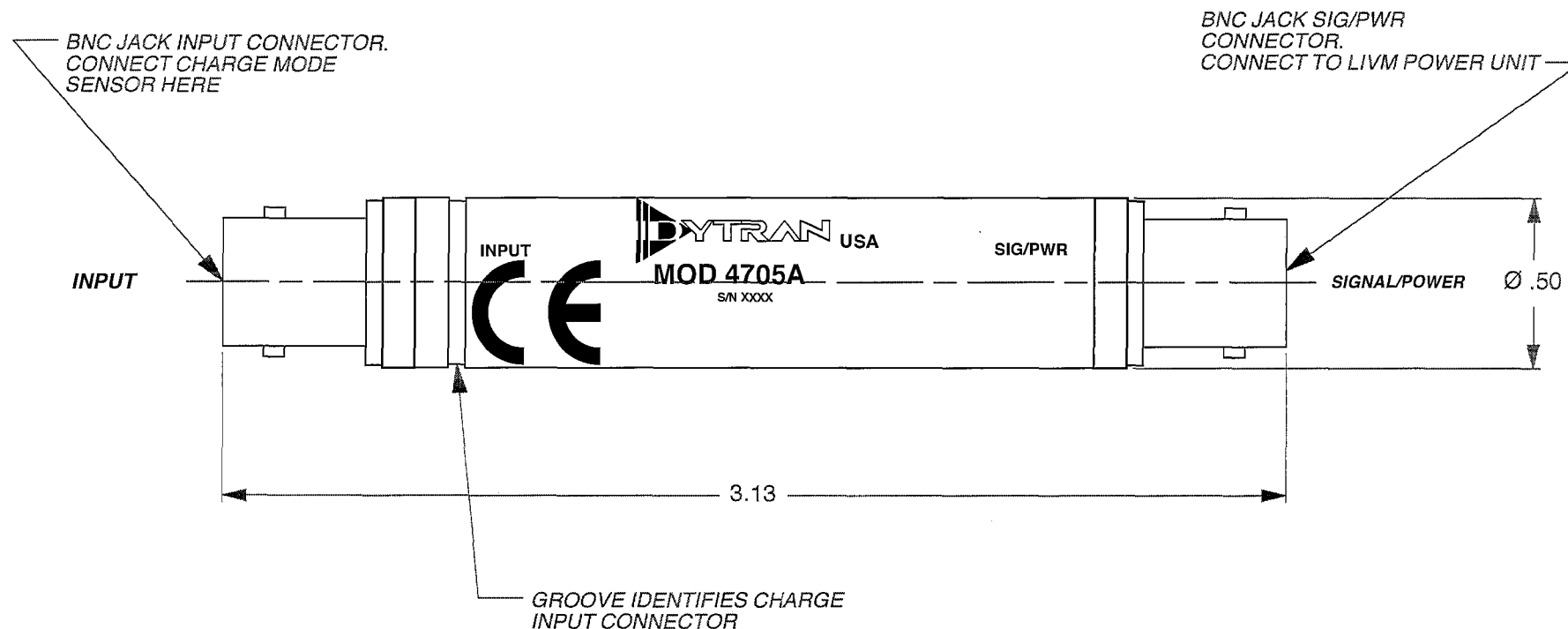


| REV | ECN   | DESCRIPTION                             | BY/DATE      | CHK | APPR |
|-----|-------|-----------------------------------------|--------------|-----|------|
| A   | 6389  | REMOVED "INSTRUMENTS, INC" FROM MARKING | RLA 11/11/09 | JS  | DV   |
| B   | 7488  | ADDED "CE" MARKING                      | RLA 04/18/11 | JS  | DV   |
| C   | 10244 | INCREASED SIZE OF "CE" MARKING          | RLA 08/12/13 | EM  | SV   |



1. WEIGHT: 27 GRAMS

|                                               |        |                                 |      |               |             |                 |   |
|-----------------------------------------------|--------|---------------------------------|------|---------------|-------------|-----------------|---|
|                                               |        | <b>MASTER</b><br>ONLY IF IN RED |      |               |             | CHATSWORTH, CA. |   |
|                                               |        |                                 |      |               |             |                 |   |
| SCALE                                         | 2X     | REV                             | -    | DATE          | SEE REV BLK | ECN             | - |
| DATE                                          | 1/7/94 | PART NO.                        |      |               |             |                 |   |
| DRAWN                                         | N.C.   | CHECKED                         | D.Z. | MAT'L         |             |                 |   |
| APPROVED                                      | N.C.   | 1/7/94                          |      | NEXT ASSEMBLY |             | USED ON 4705A   |   |
| TITLE                                         |        |                                 |      |               |             | DWG NO.         |   |
| OUTLINE/INSTALLATION DRAWING,<br>SERIES 4705A |        |                                 |      |               |             | 127-4705A       |   |
|                                               |        |                                 |      |               |             | SHEET 1 OF 1    |   |

- FAST TURN ON TIME
- MINIATURE PACKAGE

PHYSICAL

|             | ENGLISH         |    | SI              |       |
|-------------|-----------------|----|-----------------|-------|
| Weight, Max | 1.2             | oz | 33              | grams |
| Connector   | BNC Jack        |    | BNC Jack        |       |
|             | Sig/Pwr         |    | BNC Jack        |       |
| Housing     | 300 Series S.S. |    | 300 Series S.S. |       |
|             | Isolation       |    | Case Grounded   |       |

PERFORMANCE

|                                          |           |                |           |                |
|------------------------------------------|-----------|----------------|-----------|----------------|
| Sensitivity, $\pm 5\%$                   | 50        | mV/pC          | 50.0      | mV/pC          |
| Input Range, $\pm 5V$ out                | $\pm 100$ | pC             | $\pm 100$ | pC             |
| Frequency Range, $-5\%$                  | 4.8-660   | Hz             | 4.8-660   | Hz             |
|                                          | $-3dB$    |                | 1.6-2000  | Hz             |
| Feedback Capacitor                       | 50        | pF             | 50        | pF             |
| Thermal Coefficient of Sensitivity, Max. | 0.02      | $\%/^{\circ}F$ | 0.04      | $\%/^{\circ}C$ |
| Minimum Source Resistance                | 1000      | M $\Omega$     | 1000      | M $\Omega$     |

ELECTRICAL

|                          |            |          |            |          |
|--------------------------|------------|----------|------------|----------|
| Supply Current Range [1] | 2 to 20    | mA       | 2 to 20    | mA       |
| Compliance Voltage Range | +18 to +30 | VDC      | +18 to +30 | VDC      |
| Output Impedance, Typ.   | 100        | $\Omega$ | 100        | $\Omega$ |
| Output Bias Voltage      | 11         | VDC      | 11         | VDC      |
| Discharge Time Constant  | 0.6        | sec      | 0.6        | sec      |

ENVIRONMENTAL

|                       |             |             |            |                  |
|-----------------------|-------------|-------------|------------|------------------|
| Shock Max.            | 2000        | g pk        | 19620      | m/s <sup>2</sup> |
| Vibration Max.        | 300         | g pk        | 2943       | m/s <sup>2</sup> |
| Operating Temperature | -50 to +185 | $^{\circ}F$ | -46 to +85 | $^{\circ}C$      |
| Seal                  | Epoxy       |             | Epoxy      |                  |

This family also includes:

| Model  | Sensitivity (mV/pC) | Range (pC) | Insulation Resistance ( $\Omega$ ) | Feedback Capacitor (pF) |
|--------|---------------------|------------|------------------------------------|-------------------------|
| 4705A2 | 10                  | 500        | 200M                               | 100                     |
| 4705A3 | 1.0                 | 5000       | 2M                                 | 1000                    |
| 4705A4 | 0.1                 | 50000      | 1M                                 | 10000                   |

Refer to the performance specifications of the products in this family for detailed description

Supplied Accessories:

1) Accredited calibration certificate (ISO 17025)

Notes:

[1] Do not apply power to this device without current limiting, 20 mA MAX. To do so will destroy the integral IC amplifier.

TYPICAL LOW FREQUENCY RESPONSE

TYPICAL PHASE RESPONSE

Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-4705A for more information.



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