

The C12419 which furnishes current-to-voltage conversion circuit is designed for use with current sources like photomultiplier tubes.

The performances are convenient to such an application as requiring a low noise and high gain preamplifier.

FEATURES

- Bandwidth: DC to 1 MHz
- Current-to-voltage Conversion Factor:
1 V/ μ A at 1 k Ω Load Resistance
- Inverting Output
- Adjustable Offset Level with VR
- Low Noise and High Gain

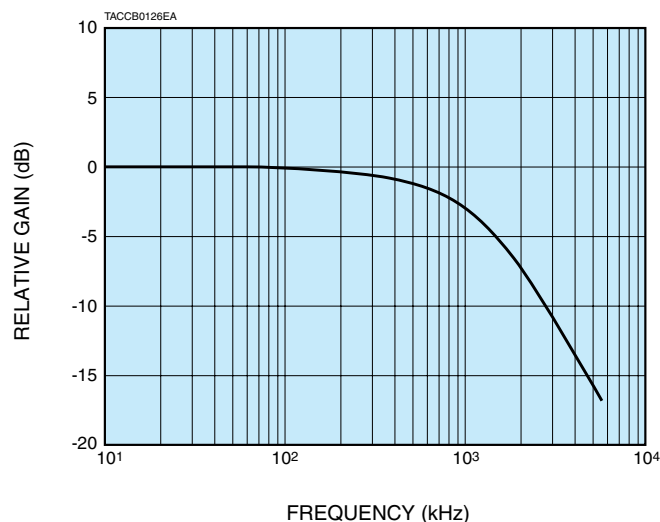
SPECIFICATIONS

| Parameter | | Description / Value |
|--------------------------------------|-------------------------------|--------------------------------------|
| Frequency Bandwidth (-3 dB) | | DC to 1 MHz |
| Current-to-voltage Conversion Factor | Load Resistance: 1 k Ω | 1 V/ μ A |
| Rise Time | Typ. | 350 ns |
| Input Polarity | | Positive / Negative |
| Max. Input Current | | $\pm 100 \mu$ A |
| Amplifying Method | | Inverting Output |
| Output Impedance | | 50 Ω |
| Maximum Output Signal Voltage | Load Resistance: 1 k Ω | ± 11 V Min. |
| | Load Resistance: 50 Ω | ± 3 V Min. |
| Output Noise Voltage ^(A) | Typ. | 1 mV rms |
| Connector | Input | BNC-R |
| | Output | BNC-R |
| | Power | DIN (6-pin) |
| Power Supply Voltage | | ± 15 V |
| Max. Power Supply Voltage | | ± 18 V |
| Power Supply Current | Max. | ± 100 mA |
| Operating Ambient Temperature | | 0 $^{\circ}$ C to +40 $^{\circ}$ C |
| Storage Temperature | | -15 $^{\circ}$ C to +60 $^{\circ}$ C |
| Weight | | Approx. 165 g |

NOTE: ^(A)Load Resistance: 50 Ω

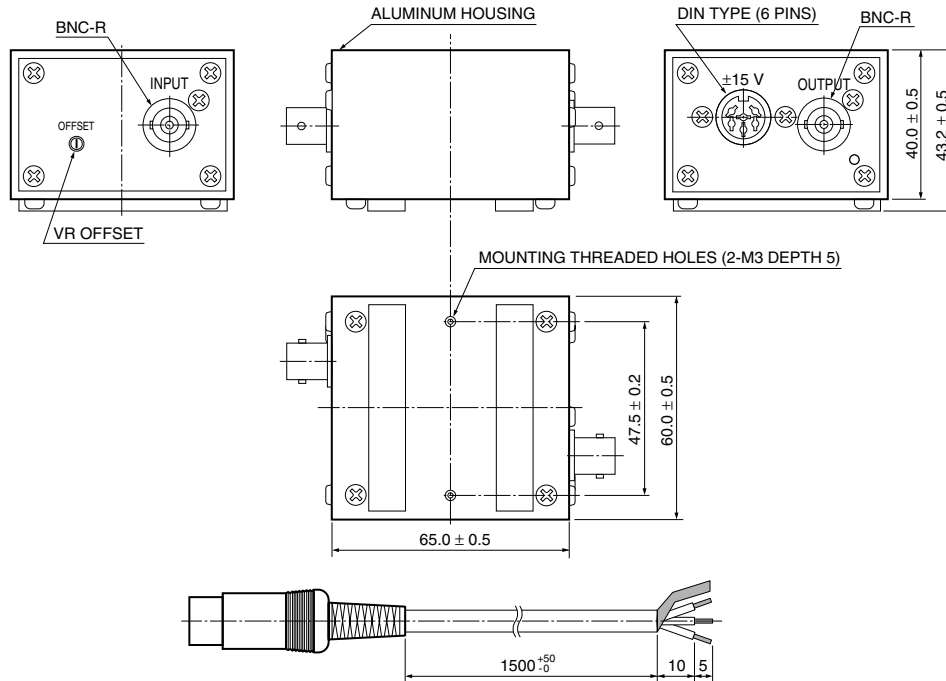


Figure 1: Typical Frequency Response



AMPLIFIER UNIT C12419

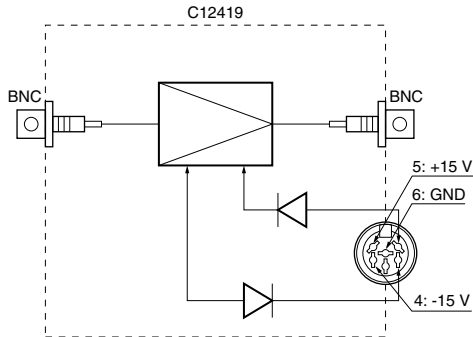
Figure 2: Dimensional Outlines (Unit: mm)



Power cable with connector (6 pin DIN type) is supplied with the C12419.

TACCA0318EA

Figure 3: Internal Connection Diagram



TACCO0160EA

| CONNECTOR PIN | WIRE COLOR | CONNECTION |
|--------------------|------------|------------|
| 1 | — | — |
| 2 | — | — |
| 3 | — | — |
| 4 | White | -15 V |
| 5 | Red | +15 V |
| 6 | Black | GND |
| External Conductor | Green | GND |

RELATED PRODUCTS

AMPLIFIER UNITS SELECTION GUIDE

| Parameter | C7319 | C12419 | C9999 | C6438 C6438-01 C6438-02 | C9663 | C11184 | C5594 |
|--|---|-------------|--------------|---|---------------|---------------|-------------------|
| Frequency Bandwidth (-3 dB) | DC to 20 kHz or DC to 200 kHz (switchable) | DC to 1 MHz | DC to 10 MHz | DC to 50 MHz | DC to 150 MHz | DC to 300 MHz | 50 kHz to 1.5 GHz |
| Current-to-Voltage Conversion Factor (Load Resistance: 50 Ω) | -0.1 V/μA -1 V/μA, -10 V/μA (switchable) * | -1 V/μA * | +50 mV/μA | +0.5 mV/μA (C6438) +25 mV/μA (C6438-01) +5 mV/μA (C6438-02) | +4 mV/μA | +1.25 mV/μA | +3.15 mV/μA |

* Load Resistance: 10 kΩ

Refer to the individual catalogs for detailed information.

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