

The output signal from a photomultiplier tube can be directly input to the C11184 and it provides a voltage output signal with 50 Ω load at a conversion factor of 1.25 mV/μA. It can be used as a wide bandwidth amplifier not only for a photomultiplier tube but also for other detectors, or simply as a wide bandwidth amplifier.

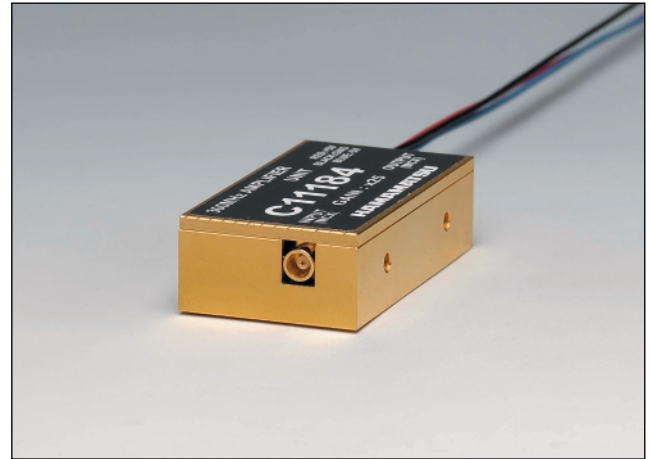
## FEATURES

- Wide Bandwidth: DC to 300 MHz
- Current-to-voltage Conversion Factor:  
1.25 mV / μA at 50 Ω load resistance
- Rise Time: 1.2 ns (Typ.)
- Non-inverting Output
- Compact · Light Weight
- MCX Connector

## SPECIFICATIONS

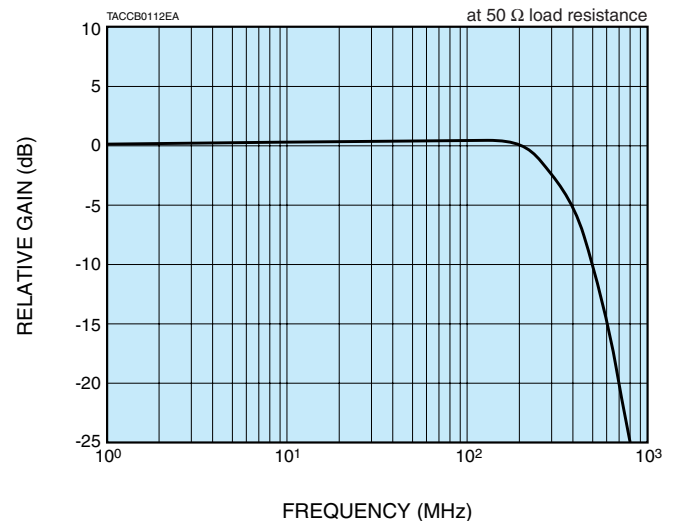
| Parameter                            |                       | Description / Value                |
|--------------------------------------|-----------------------|------------------------------------|
| Frequency Bandwidth (-3 dB)          |                       | DC to 300 MHz                      |
| Voltage Gain <sup>Ⓐ</sup>            |                       | 28 dB ± 2 dB<br>(Approx. 25 times) |
| Current-to-voltage Conversion Factor | Load Resistance: 1 MΩ | 2.5 mV/μA                          |
|                                      | Load Resistance: 50 Ω | 1.25 mV/μA                         |
| Rise Time                            | Typ.                  | 1.2 ns                             |
| Input Polarity                       |                       | Positive / Negative                |
| Amplifying Method                    |                       | Non-inverting Output               |
| Input Impedance                      |                       | 50 Ω                               |
| Recommended Load Resistance          |                       | 50 Ω                               |
| Maximum Output                       | Load Resistance: 1 MΩ | ±2 V Min.                          |
| Signal Voltage                       | Load Resistance: 50 Ω | ±1 V Min.                          |
| Output Noise Voltage <sup>Ⓐ</sup>    | Typ.                  | 1 mV rms                           |
| Connector                            | Input                 | MCX-R <sup>Ⓑ</sup>                 |
|                                      | Output                | MCX-R <sup>Ⓑ</sup>                 |
|                                      | Power                 | DIN (6-pin)                        |
| Power Supply Voltage                 |                       | ±5 V                               |
| Max. Power Supply Voltage            |                       | ±6.5 V                             |
| Power Supply Current                 | Max.                  | ±70 mA                             |
| Operating Temperature                |                       | 0 °C to +40 °C                     |
| Storage Temperature                  |                       | -15 °C to +60 °C                   |
| Weight                               |                       | Approx. 40 g                       |

**NOTE:** <sup>Ⓐ</sup>Load Resistance: 50 Ω  
<sup>Ⓑ</sup>MCX-BNC adapter is supplied



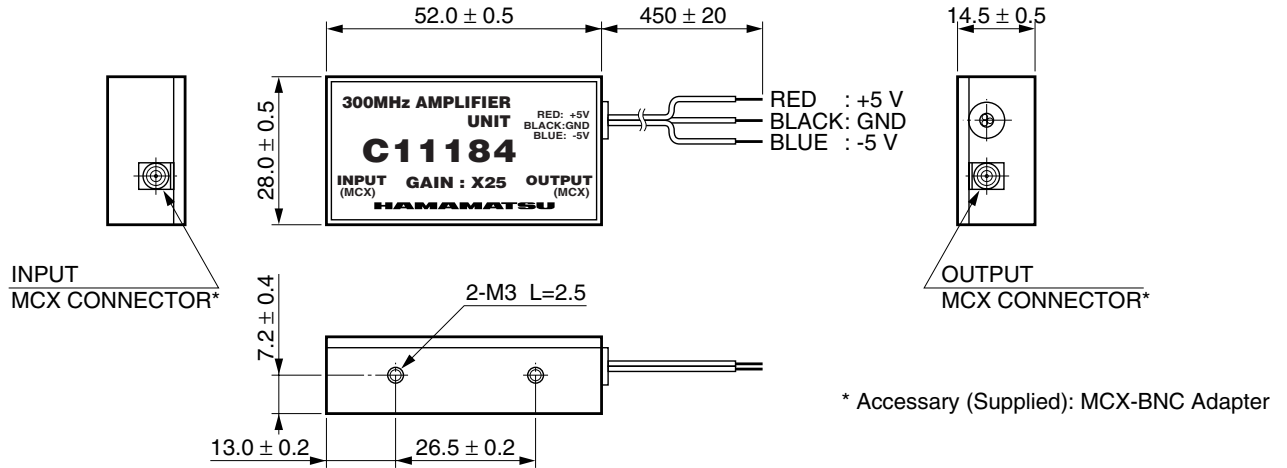
Accessory (Supplied): MCX-BNC Adapter (2pcs)

Figure 1: Typical Frequency Response

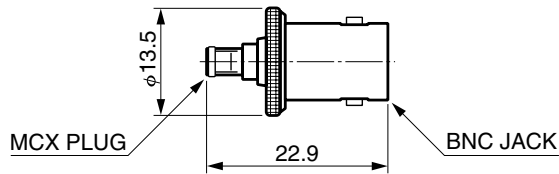


# WIDE BANDWIDTH AMPLIFIER UNIT C11184

Figure 2: Dimensional Outlines (Unit: mm)



## MCX-BNC Adapter (2 pcs) (SUPPLIED)



Please consult our sales office when there is on uncertain point about the connection terminal

TACCA0303EA

## RELATED PRODUCTS

### AMPLIFIER UNITS SELECTION GUIDE

| Parameter  | C7319                                      | C9999        | C6438        | C6438-01     | C9663         | C11184        | C5594             |
|--|--|--------------|--------------|--------------|---------------|---------------|-------------------|
| Frequency Bandwidth (-3 dB)                                  | DC to 20 kHz or DC to 200 kHz (switchable) | DC to 10 MHz | DC to 50 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<br>1 V/μA, 10 V/μA (switchable)   | 50 mV/μA     | 0.5 mV/μA    | 25 mV/μA     | 4 mV/μA       | 1.25 mV/μA    | 3.15 mV/μA        |

Refer to the individual catalogs for detailed information.

## HAMAMATSU PHOTONICS K.K. [www.hamamatsu.com](http://www.hamamatsu.com)

### HAMAMATSU PHOTONICS K.K., Electron Tube Division

314-5, Shimokanzo, Iwata City, Shizuoka Pref., 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P. O. Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: [usa@hamamatsu.com](mailto:usa@hamamatsu.com)

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: [info@hamamatsu.de](mailto:info@hamamatsu.de)

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: [infos@hamamatsu.fr](mailto:infos@hamamatsu.fr)

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road Welwyn Garden City Hertfordshire AL7 1BW, United Kingdom, Telephone: 44-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: [info@hamamatsu.co.uk](mailto:info@hamamatsu.co.uk)

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: [info@hamamatsu.se](mailto:info@hamamatsu.se)

Italy: Hamamatsu Photonics Italia: S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: [info@hamamatsu.it](mailto:info@hamamatsu.it)

TACC1043E02  
FEB. 2011 IP