

HAMAMATSU

PRELIMINARY DATA
JUN. 2000

PREAMPLIFIER UNIT C7319

The C7319 which furnishes current-to-voltage conversion circuit is designed for use with current sources like photomultiplier tubes.

The C7319 has three switchable conversion ratios; 10^5 , 10^6 and 10^7 volts per ampere and also has two switchable bandwidth selections.

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

FEATURES

- 10^5 , 10^6 and 10^7 V/A conversion ratios
- 20 kHz and 200 kHz bandwidth with switch selecting
- Adjustable offset level with VR included
- Operatable with wide supply voltage : ± 5 V to ± 15 V

MAXIMUM RATINGS

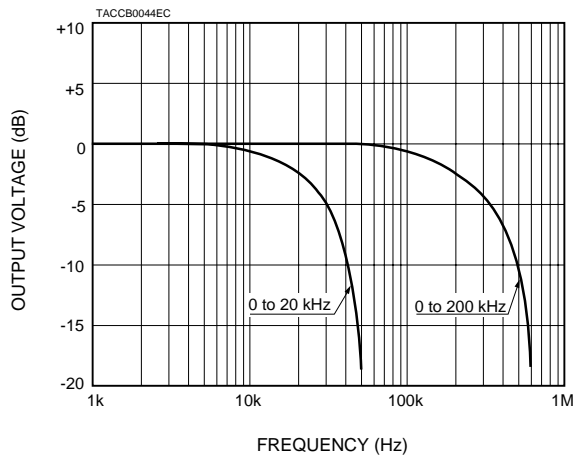
Parameter	Value	Unit
Supply Voltage	± 18	Vdc
Operating Temperature	0 to +40	$^{\circ}\text{C}$
Storage Temperature	-20 to +60	$^{\circ}\text{C}$

CHARACTERISTICS

Parameter	Conversion Ratio			Unit
	10^5 V/A	10^6 V/A	10^7 V/A	
Supply Voltage	± 5 to ± 15			Vdc
Supply Current (at ± 15 V)	± 8			mA Typ.
Current to Voltage Conversion Factor	10^5	10^6	10^7	V/A
Maximum Output Voltage with no load resistor (at ± 15 V)	13			V
Output Voltage with 50 Ω load resistor	2			V
Maximum Input Signal Current (at ± 15 V)	130	13	1.3	μA
Frequency Bandwidth (-3 dB)	0 to 20 or 0 to 200 *			kHz Typ.
Input Polarity	Positive/Negative			-
Amplifying Method	Inverted Output			-
Output Impedance	50			Ω
Equivalent Noise Input (rms)	0 to 20 kHz	1.5	0.2	nA Typ.
	0 to 200 kHz*	3.0	0.6	
Case Material	Aluminum			-
Weight	170			g

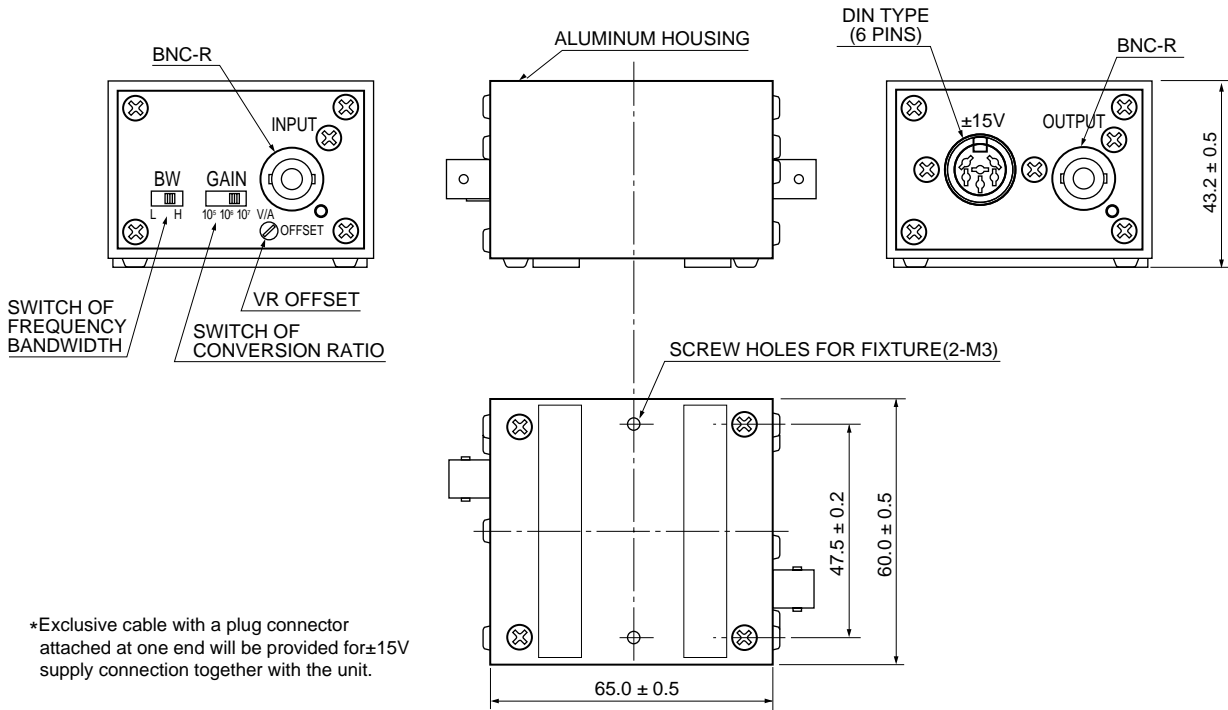
NOTE : *Only in selecting 10^7 V/A conversion ratio, to be limited to 0 to 100 kHz frequency bandwidth.

Figure 1: Frequency Response



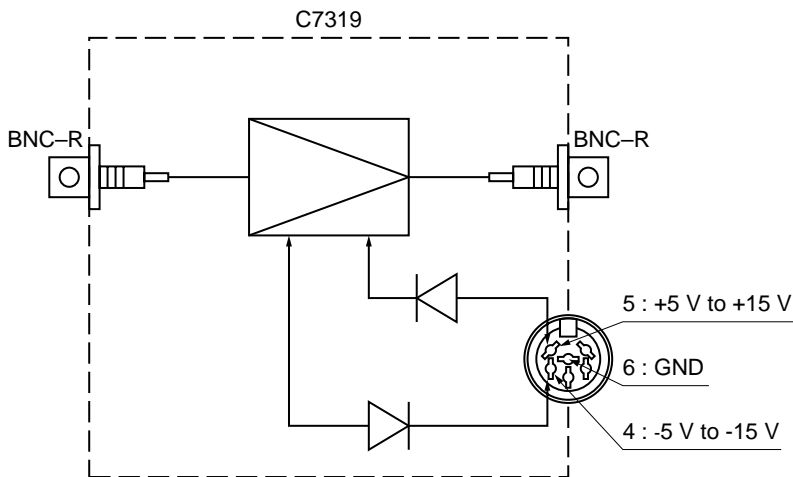
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Figure 2: Dimensional Outlines (Unit : mm)



TACCA0174EA

Figure 3: Internal Connection Diagram



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

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