

### FEATURES

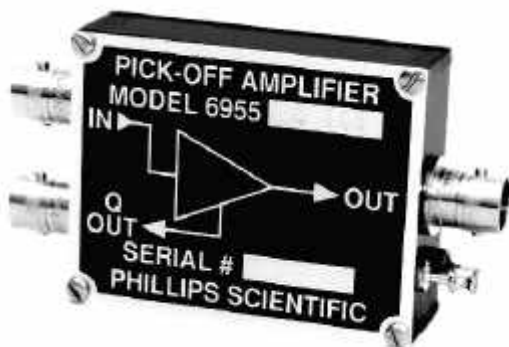
- \* Combines Charge and Timing Pick-Off Functions
- \* Wideband Performance 20 MHz to 700 MHz
- \* Gains Available from 5 to 100
- \* Bipolar Operation

### DESCRIPTION

The Model 6955 is a fast risetime, bipolar charge pick-off and timing preamplifier. It is intended for use with fast Solid State and Channel Plate Detectors. Standard fixed voltage gains of 5, 10, 20, 50 or 100 are available from the timing output, while the input pulse current is integrated and available at the charge output. This is useful when both timing and energy measurements are simultaneously required. Both the input and charge output have  $\pm 1$ KV isolation for detector biasing.

### SPECIFICATIONS

- Input** : One; Transformer Coupled, Impedance 50 ohms;  $\pm 1$  KVolt isolation.
- Charge Output** : One; Direct Coupled to input,  $\pm 1$  KVolt isolation. Provides a current integrated output of the fast input pulse. Intended to operate into a standard slow charge amplifier.
- Timing Output** : One; AC Coupled, Drives  $\pm 2$  Volts across single 50 ohm load. Voltage gain and other characteristics are as follows:
- |   |                    |
|---|--------------------|
| <b>Voltage Gain</b> : 5 or 10               | 20, 50 or 100      |
| <b>Bandwidth (3db)</b> : 20 MHz to 700 MHz  | 20 MHz to 600 MHz  |
| <b>Risetime</b> : 500 pSec                  | 600 pSec           |
| <b>Insertion Delay</b> : Typically 1.5 nSec | Typically 1.9 nSec |
- Wideband Noise** : Less than 40  $\mu$ Volts RMS referred to input, for gains of 10 or 100.  
Less than 70  $\mu$ Volts RMS for gains of 5, 20 and 50.
- Power Supply Requirements** : +10 Volts to +28 Volts @ 100 mA for gains of 10 and below.  
+10 Volts to +28 Volts @ 180 mA for voltage gains above 10.
- \* **Note:** Internal supply is regulated. A heatsink is recommended for 24 Volts and above.
- Operating Temp.** : 0 °C to 60 °C ambient.
- Connector Type** : SMA female or BNC female. (Specify when ordering)
- Packaging** : Black anodized aluminum enclosure. 2.25" x 1.75" x .75", (5.72cm x 4.45cm x 1.9cm)
- Ordering Information** : Please specify **Model**, **Gain** and **Connector** type when ordering.  
(e.g, Part Number **6955 - S - 10**), Connector: **SMA**, (B for BNC), Gain: 5, **10**, 20, etc.



3/96

