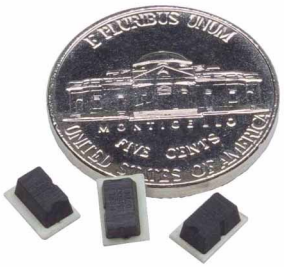
# Model SM500

## Surface Mount DC Block



### 7 kHz to 35 GHz

The Model SM500 is an ultra-broadband, surface-mount DC Block designed for use in 20 Gb/s systems. It passes very fast risetime pulses with a minimum of waveform distortion. The risetime is only 10 ps, and the -3 dB bandwidth extends over many decades from 7 kHz to 35 GHz. The small size and low cost enable system designers to achieve their increasingly stringent package size and cost goals. As a leadless, solder-mount, electrical component, it can be connected to microstrip lines on a circuit board. This component is ideal for automated assembly. A product guide, PG-3043, with additional information is available at the time of order.

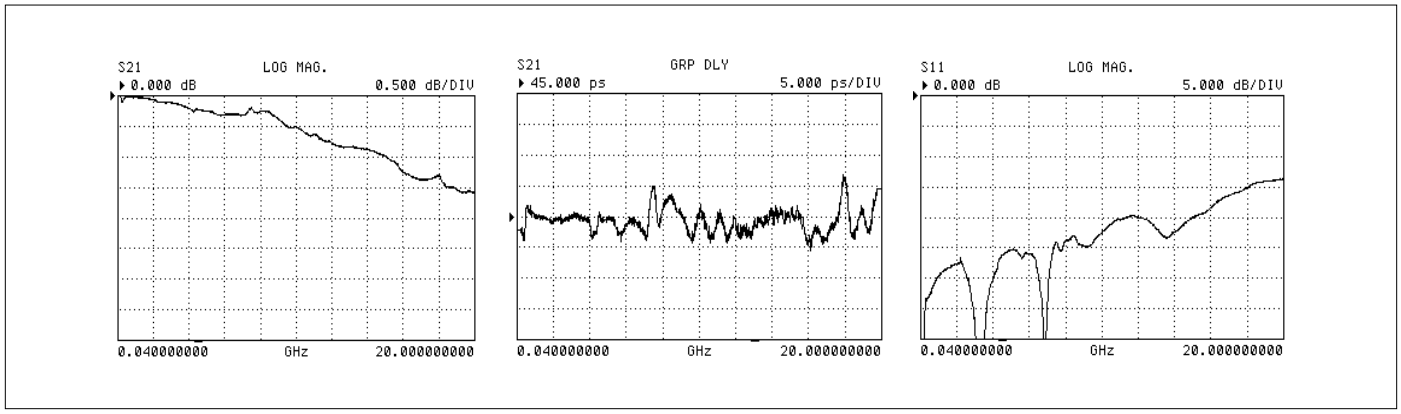
| | | | |
|---|---|---|---|
| **Bandwidth** (-3 dB) | 35 GHz typical<br>> 20 GHz guaranteed | **Mounting** | Surface-Mount.<br>Solder pads on bottom of part. |
| **Low Frequency** (-3 dB) | 7 kHz typical | **Capacitance** | 0.22 µF, -50%, +80% |
| **Risetime** (10% - 90%) | 10 ps typical | **DC Voltage** | 16 V max. |
| **Insertion Loss** | See Plot | **Size** | See drawing |
| **Impedance** | 50 Ω | **Temperature Range**<br>Operating<br>Storage | <br>-25 C to +85 C case temp<br>-40 C to +85 C |
| **Warranty** | One year. See Terms and Conditions of Sale for details. | | |

### Ordering Information

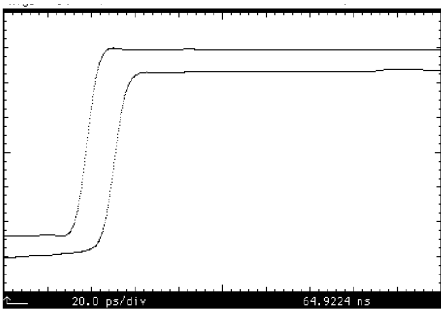
| Model Number | Description |
|---|---|
| SM500-801 | Surface Mount DC Block: 7 kHz to 35 GHz, (10 ps risetime), 16 V DC max. |
| SM500-802 | SM500 on tape and reel; 12mm-wide tape, 8mm pitch, leaders on full reels of 3,000 parts |
| SM500-803 | SM500 mounted on evaluation board |

**Microwave Frequency Response**

Linear Sweep from 40 MHz to 20 GHz (2.0 GHz/div)

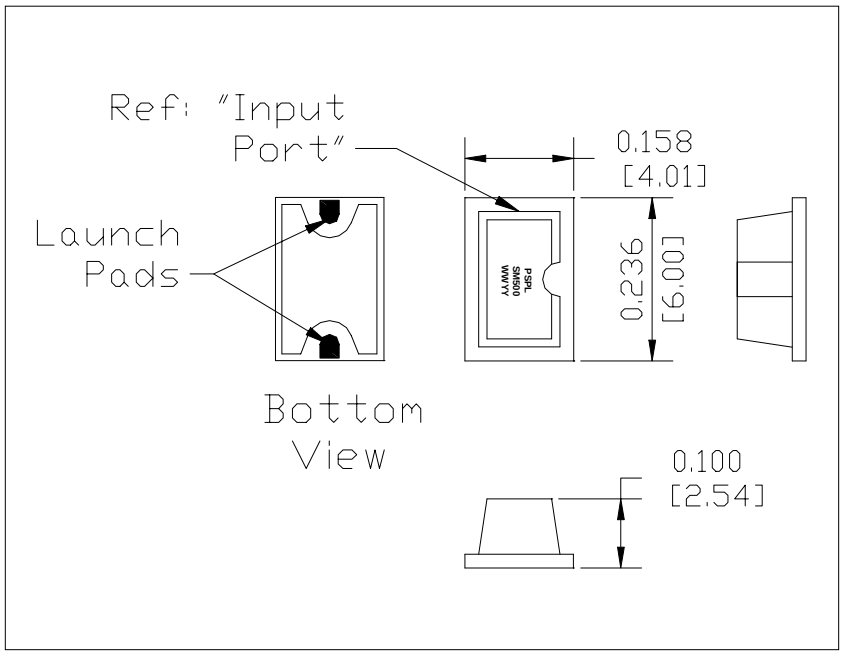



**Step Response, 20 ps/div**




Upper trace is 10 ps risetime input, lower trace is output

**SM500 Mechanical Drawing**




Dimensions given are in inches [mm]