



Figure A A conceptual,  $500\Omega$ ,  $Z_0$ ,  $10\times$  oscilloscope probe. If  $R_1=4950\Omega$ ,  $5\text{-k}\Omega$  input resistance with  $100\times$  signal attenuation results. Terminated into  $50\Omega$ , the probe theoretically constitutes a distortionless transmission line. The do-it-yourself probes suffer uncompensated parasitics, causing unfaithful response above approximately  $100\text{ MHz}$ .

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