

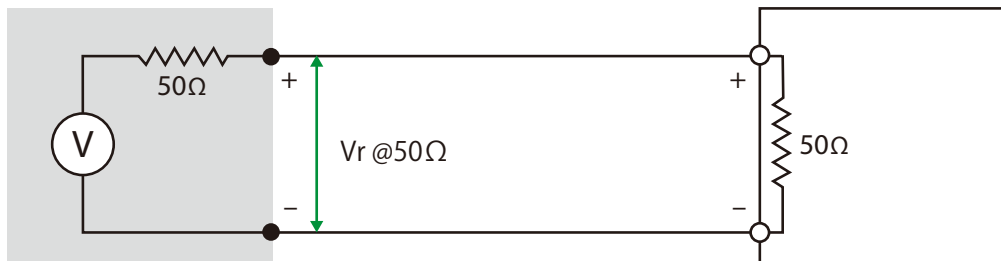
The function generator outputs the original signal voltage “V(=2×Vs) on the premise of 50Ω termination. The voltage Vr[V] applied to the load impedance R[Ω] is obtained as follows when the output voltage set to Vs[V].

$$V_r [V] = 2 \times V_s [V] \times \frac{R[\Omega]}{(50[\Omega] + R[\Omega])}$$

- When Load R=50Ω、 Setting Voltage: Vs = 10Vp-p  
 $V_r[V_{p-p}] = 2 \times 10[V_{p-p}] \times 50[\Omega] / (50[\Omega] + 50[\Omega]) = 10[V_{p-p}]$
- When Load R=1MΩ、 Vs = 10Vp-p  
 $V_r[V_{p-p}] = 2 \times 10[V_{p-p}] \times 1M[\Omega] / (50[\Omega] + 1M[\Omega]) \approx 20[V_{p-p}]$

## 50Ω Load

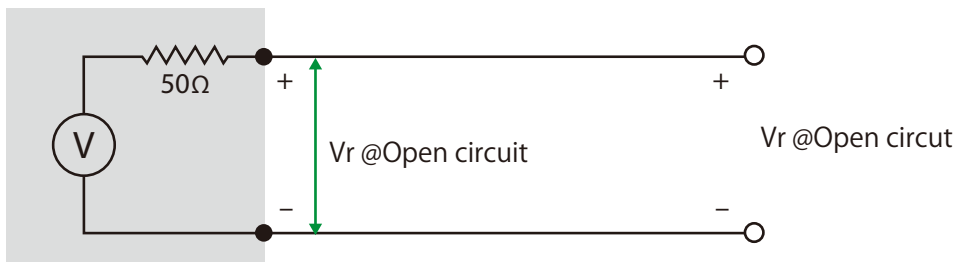
Function Generator



AFG series: 1 mVpp to 10 Vpp (into 50Ω)

## Open circuit

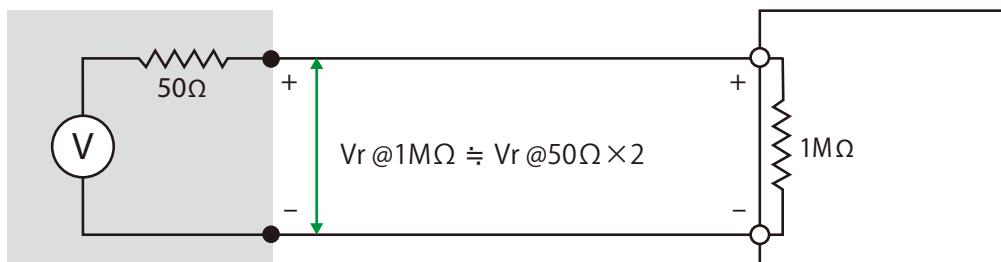
Function Generator



$V_r @ 50\Omega \times 2 = V_r @ \text{Open Circuit}$

## 1MΩ

Function Generator



AFG series: 2 mVpp to 20 Vpp (@1MΩ)