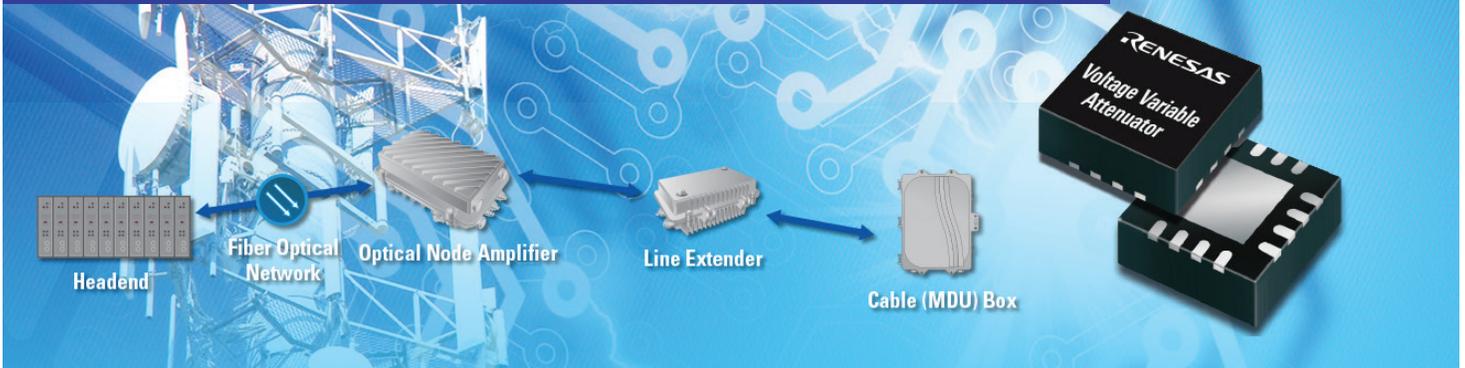


VOLTAGE VARIABLE ATTENUATORS



Renesas's Voltage Variable Attenuator (VVA) family offers analog control for applications that require continuous, smooth and precise attenuation control. The F22xx family of devices covers a broad frequency range as wide as 1 to 6000 MHz, has nearly half the insertion loss of competitive solutions, features high IP3 performance, and is linear in dB attenuation across the voltage control range.

Using silicon-based RF semiconductor technology, Renesas attenuators offer a robust alternative to older GaAs-based semiconductor technology. Silicon technology offers the advantages of more robust electrostatic discharge (ESD) protections, better moisture sensitivity levels (MSL), improved thermal performance, lower current consumption, and the proven reliability of silicon technology.

Features and benefits

- Supports 50Ω and 75Ω applications
- Wide operating frequency range from 1 to 6000 MHz
- Low insertion loss of 1.1 dB @ 300 MHz
- High linearity maintained over frequency range:
 - Typical / Min IIP3 : 65 dBm / 47 dBm
 - Typical / Min IIP2 : 95 dBm / 87 dBm
- -40 to 105°C operating temperature range offers excellent temperature and thermal characteristics
- Linear-in-dB attenuation characteristics
- Positive or negative slope attenuation control feature
- Bi-directional RF ports
- High reliability silicon technology

Part Number	Description	Frequency (GHz)	Max Att. (dB)	IL (dB)	IP1dB (dBm)	IIP3 (dBm)	Voltage (V)	Current (mA)	Package (mm)
F2250	Positive or Negative Slope Control	0.05 – 6	35	1.4	34.4	65	3.3	1.17	3 x 3, 16-Pin
F2251	Positive Slope Control	0.05 – 6	35	1.4	34.4	67	3.3	0.8	3 x 3, 16-Pin
F2255	Positive or Negative Slope Control	0.001 – 3	34.6	1.1	36	60	3.3	1.15	3 x 3, 16-Pin
F2258	Negative Slope Control	0.05 – 6	35	1.4	34.4	65	3.3	1.17	3 x 3, 16-Pin
F2270	Positive or Negative Slope Control	0.005 – 3	35	1.1	36	60	3.3	1.4	3 x 3, 16-Pin

To request samples, download documentation or learn more visit: idt.com/attenuator