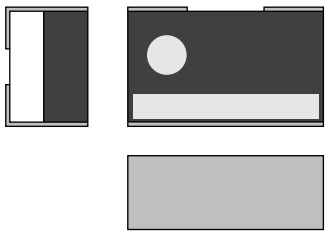
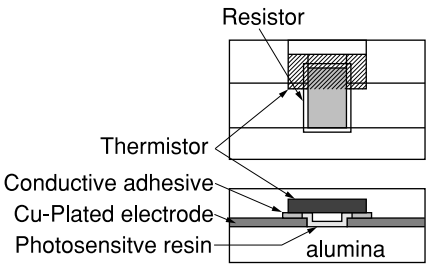
Variable Chip Attenuators

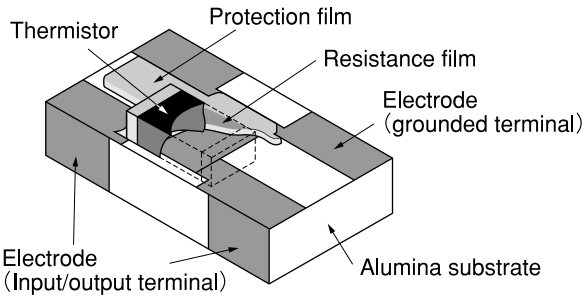
Structure

Structure :Combine a NTC at the center of a thin film chip attenuator in parallel.



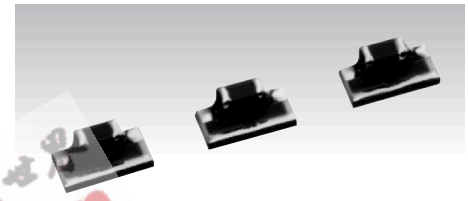


PXV1220S



PBX1632S

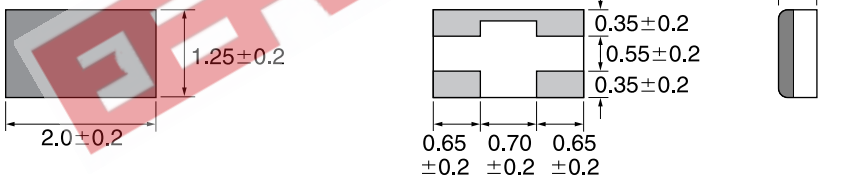
Features



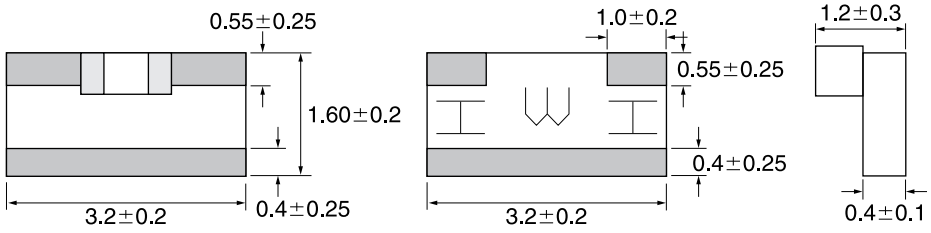
- Simplify compensation circuit for high frequency amplifier's output gain.
- 8 types of thermal characteristics are available for each of the 11 types of attenuations.
- Excellent temperature and noise characteristics due to thin film resistance elements.
- Operational frequencies are between DC and 3GHz.

Specifications

PXV1220S



PBV1632S



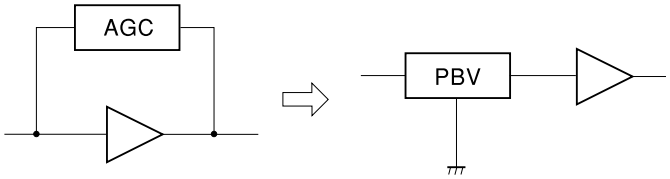
top side　　bottom side　　(Dimension：mm)

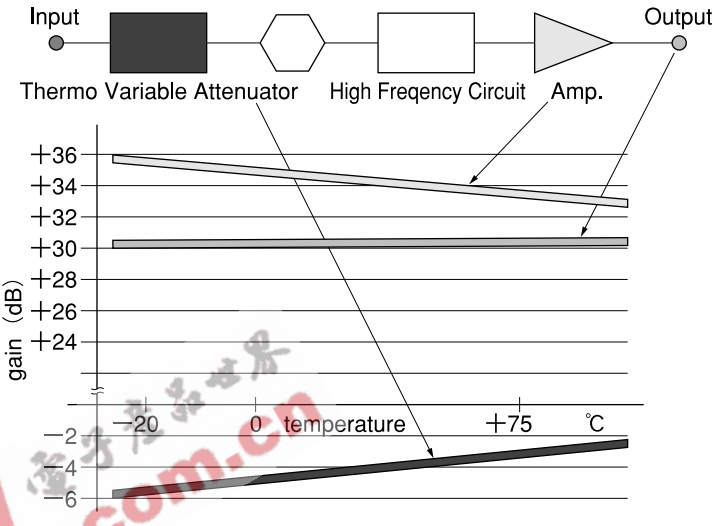
Type	PXV1220S(0805)		PBV1632S(1206)	
Attenuation	1,2, 3, 4, 5, 6, 7, 8, 9, 10dB		1,2, 3, 4, 5, 6, 7, 8, 9, 10, 16dB	
Attenuation Tolerance	±0.5dB(@20˚C, no load)			
Impedance	50 ohm			
VSWR	less than 1.3			
Temperature Coefficicient of Attenuation	N1～N8 ex : 6dB	N1 0.0119dB/dB*˚C		N5 0.0041dB/dB*˚C
		N2 0.0088dB/dB*˚C		N6 0.0035dB/dB*˚C
		N3 0.0062dB/dB*˚C		N7 0.0026dB/dB*˚C
		N4 0.0047dB/dB*˚C		N8 0.0019dB/dB*˚C
Frequency Range	DC ～3GHz(6GHz)			
Rated Current	63mW		100mW	
Operating temperature	−40˚C～+100˚C			

Application

Gain temperature compensation

To stabilize output gain of GaAs MOS-FET high power amplifier by replacing conventional temperature compensation circuits and simplify the complicate amplifier design without software program.





Outline of operation

The thermistor in a thermal sensitive attenuator varies power attenuation by changing the current of thermistor with temperature change. Rise in temperature is accompanied by decrease in power attenuation in this simple SMT chip temperature variable attenuator, and output gains in a GaAs amplifier decrease with rise in temperature. With these two effects combined, a stable output gain could be easily obtained regardless of temperature.