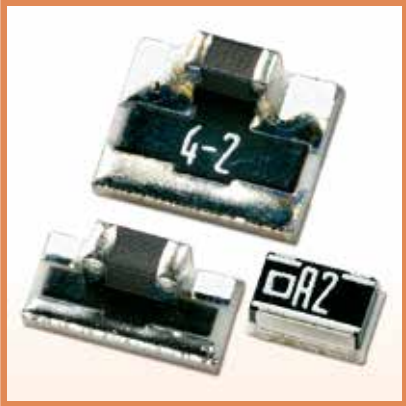




Thermo-variable Chip Attenuator

■ P*V Series

Features

- Simple solution for compensation for the temperature drift of GaAs amplifier
- Resistive construction allows operation in wide frequency range
- Ten different attenuation x 8 or 9 temperature characteristics: over 80 different offerings to meet any amplifier characteristics.

Applications

- Cell phone base station
- Wireless remote controller



*Except for Chinese RoHS

◆ Part numbering system

PXV

Series code

1220S

Size : PXV1220S, PBV1632S
PAV3137S

- 6dB

N1

Thermo sesitive characteristic: N1~N9

- T

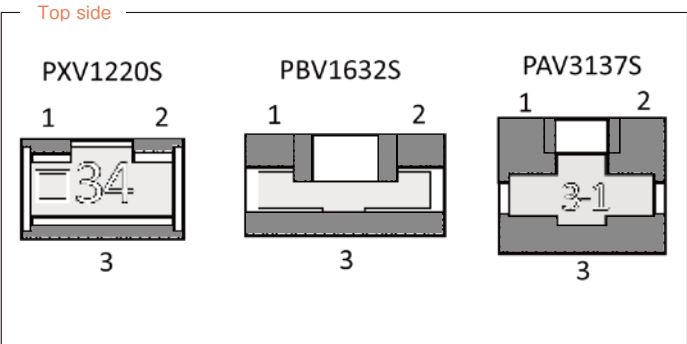
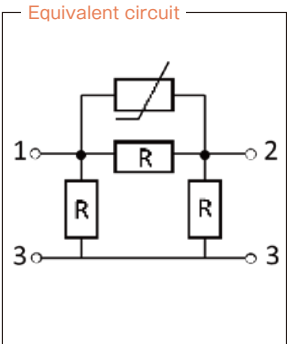
Attenuation : 2 digit

Packing quantity:
T=Tape(T02, T1), B=Bulk

◆ Electrical Specification

Type	PXV1220S	PBV1632S	PAV3137S
Attenuation	1 ~ 10dB (1dB Step)	1 ~ 10dB, 16dB (1dB Step)	1 ~ 10dB (1dB Step)
Attenuation tolerance	±0.5dB(@25℃, no load)		
Impedance	50Ω		
VSWR	<1.3		
Termo Sensitive characteristic	N1 ~ N9 (1db ~ 3dB) N1 ~ N8 (4db ~ 10dB)	N1 ~ N9 (1db ~ 3dB) N1 ~ N8 (4db ~ 16dB)	N1 ~ N9 (1db ~ 3dB) N1 ~ N8 (4db ~ 10dB)
Operating frequency	DC ~ 3GHz		DC ~ 6GHz
Rated power	63mW	100mW	2W
Operating temperature	-40℃~+100℃		-40℃~+125℃
Packaging quantity	100pcs/bag(B) 200pcs/reel (T02) 1000pcs/reel (T1)	20pcs/bag (B) 1,000pcs/reel (T1)	

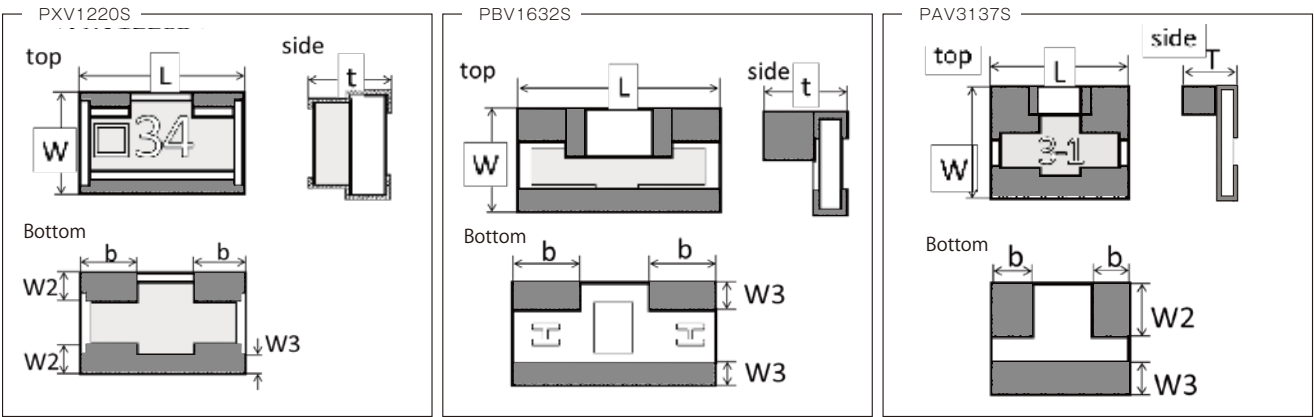
◆ Equivalent Circuit and pin arrangement



High frequency surface mount components

P*V series

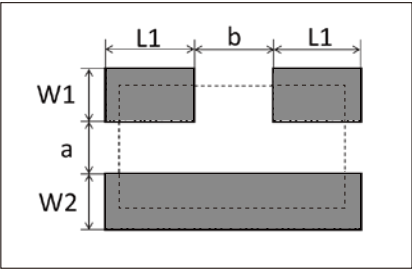
◆Dimensions



Type	Size (inch)	L	W	t	b	W2	W3
PXV1220S	0805	2.00±0.20	1.25±0.20	1.1max	0.65±0.20	0.38±0.20	0.25±0.35
PBV1632S	1206	3.20±0.20	1.60±0.20	1.5max	1.00±0.20	—	0.40±0.35
PAV3137S	1512	3.70±0.20	3.10±0.20	1.5max	1.00±0.20	1.50±0.20	0.85±0.20

(unit : mm)

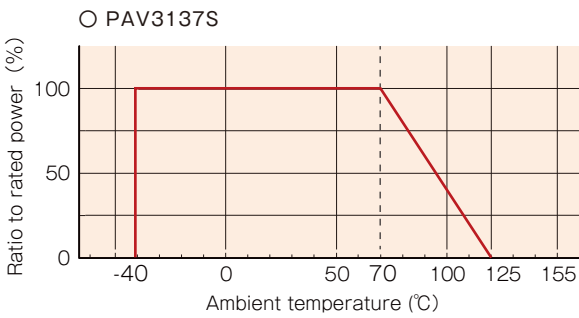
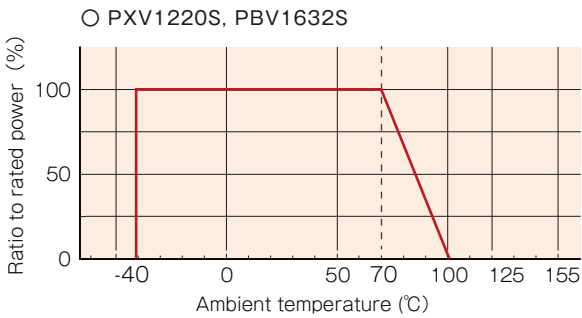
◆Recommended land patterns(soldering footprints)



Type	W1	W2	a	L1	b
PXV1220S	0.70	0.70	0.50	0.80	0.70
PBV1632S	0.80	0.80	0.70	1.20	1.00
PAV3137S	1.55	1.15	0.60	1.25	1.50

(unit : mm)

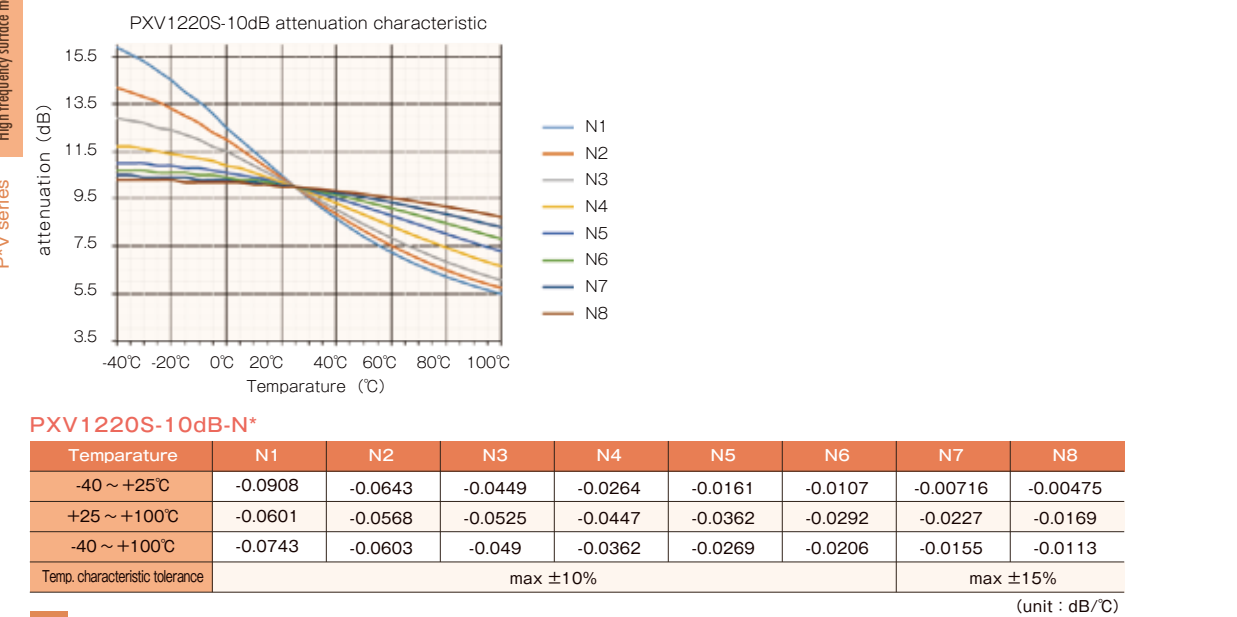
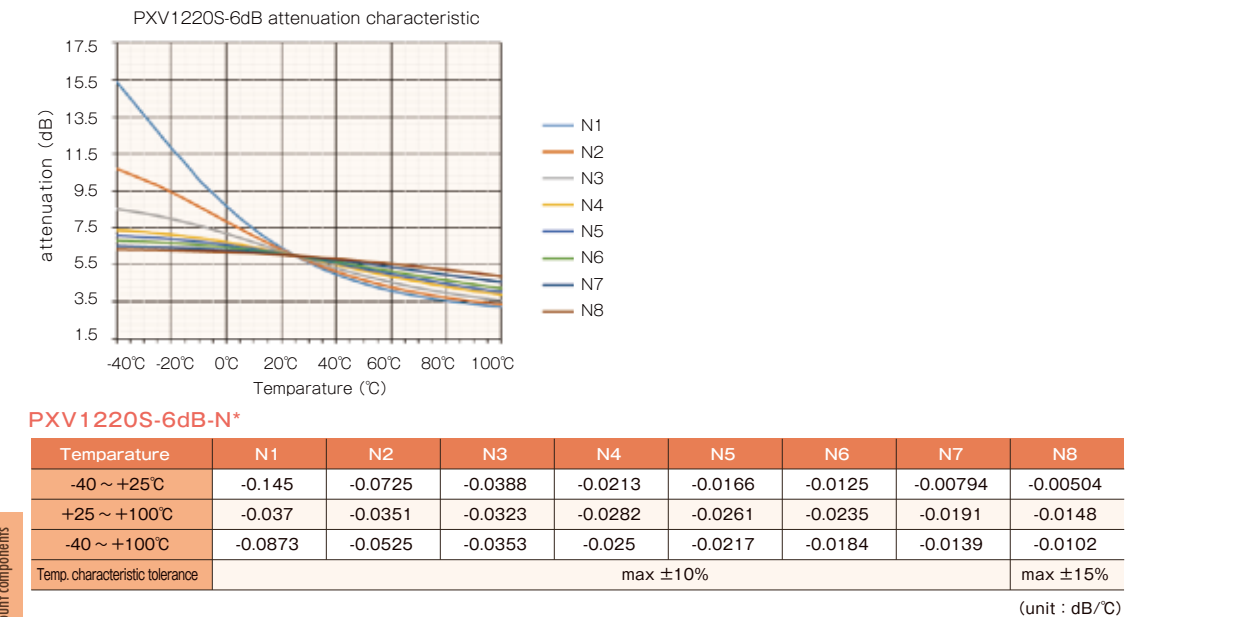
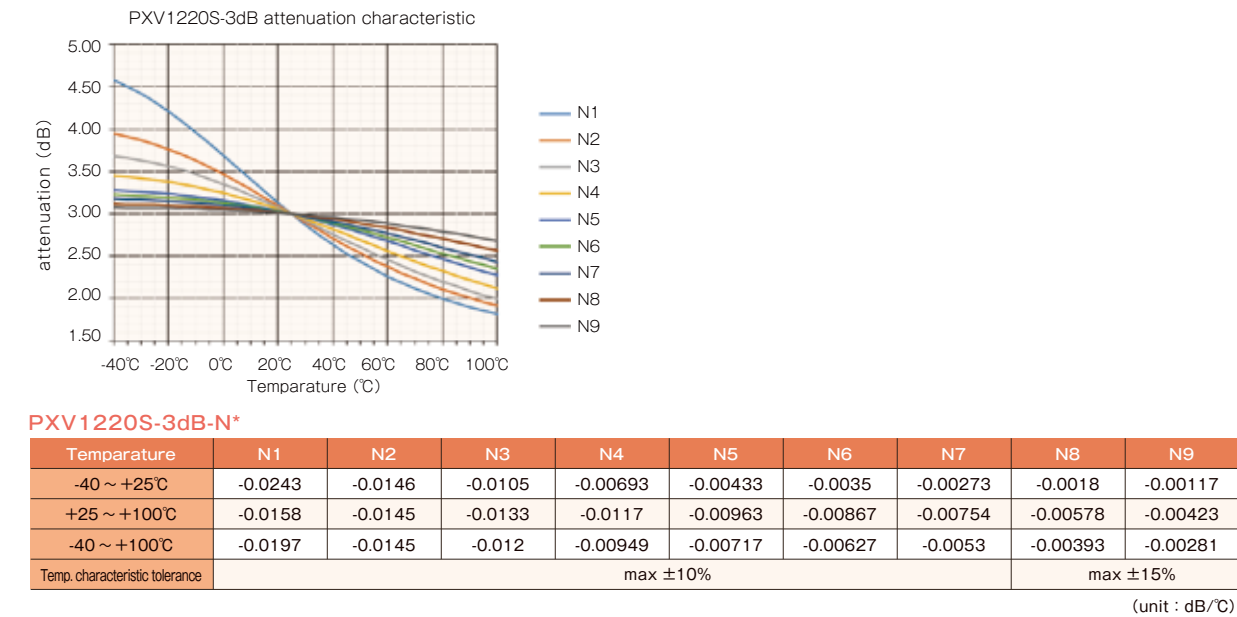
◆Derating Curve



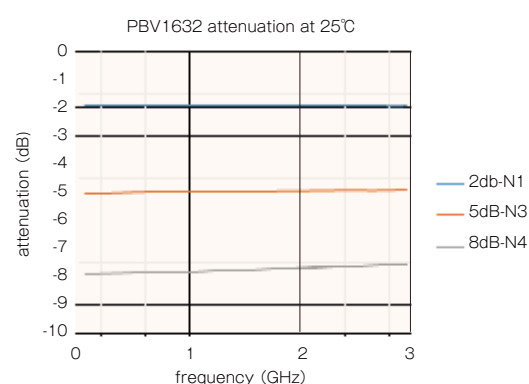
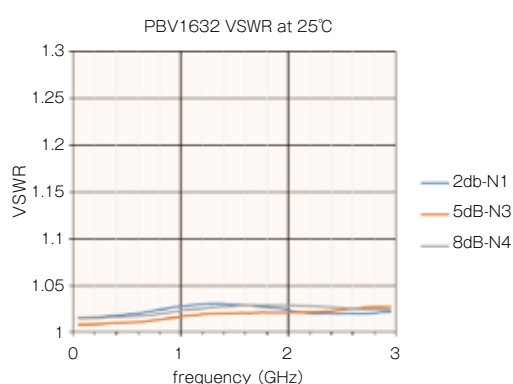
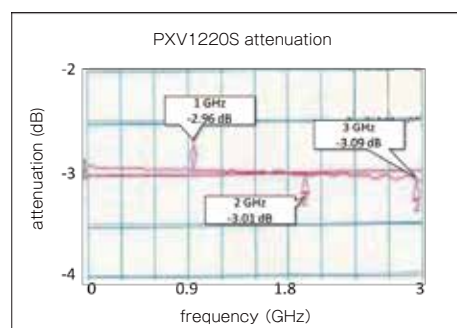
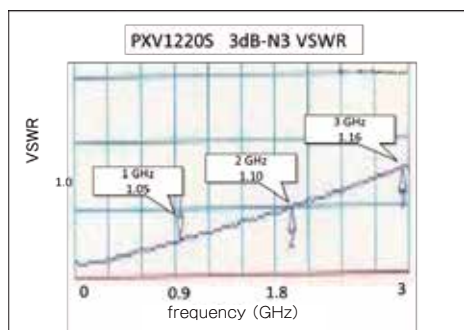
Thermo-variable Chip Attenuator

P*V Series

◆ Attenuation amount temperature characteristic



◆ High frequency characteristics (measured value)



◆ Example of use

- High frequency GaAs transistor amplifiers' gain decreases as temperature increases.
- Integrating this attenuator into amplifier circuit compensates the gain loss and keep the gain constant in the circuit. (figure below)
- Replaces complex feedback circuits.

