



Product Family: [High Precision Chip Attenuators](#)

Part Number Series: [PAT W-Series](#)

	<p>Construction:</p> <ul style="list-style-type: none"> • High Purity Alumina Substrate • Ni alloy thin-film resistive elements • Wrap around electrodes • 100% matte tin over Ni terminations (RoHS compliant and Pb Free) 	<p>Features:</p> <ul style="list-style-type: none"> • 1712 and 2218 English case sizes • Attenuation values between 0-20dB • Attenuation tolerances as tight as ± 0.1 dB • 50Ω impedance • High volume production suitable for commercial and special applications
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Description:

These precision chip attenuators offer a very wide functional frequency range and are ideal for circuits that handle different frequencies. Compared to attenuation circuits consisting of a combination of discrete resistors, the greatly reduced parasitic capacitance and inductance of these attenuators allow for the true value to be obtained. One center signal terminal and two ground side terminals offer easy integration within connectors. The standard offering is for these products to be placed into the carrier tape with the pattern side facing up as reflected in the taping orientation diagram. Parts are also available taped with pattern side facing down as reflected in the Part Numbering section.

Product Dimensions:

<p><u>Top Side</u> <u>Bottom Side</u> <u>Schematic</u></p> <p>PAT3042</p>	<table border="1"> <thead> <tr> <th>Dimension</th> <th>PAT3042C (English 1712)</th> <th>PAT4556C (English 2218)</th> </tr> </thead> <tbody> <tr> <td>L (Length)</td> <td>0.165 \pm 0.008</td> <td>0.220 \pm 0.008</td> </tr> <tr> <td>W (Width)</td> <td>0.118 \pm 0.008</td> <td>0.177 \pm 0.008</td> </tr> <tr> <td>H (Height)</td> <td>0.032 \pm 0.006</td> <td>0.032 \pm 0.006</td> </tr> <tr> <td>W2 (Electrode Width)</td> <td>0.035 \pm 0.004</td> <td>0.055 \pm 0.004</td> </tr> </tbody> </table>	Dimension	PAT3042C (English 1712)	PAT4556C (English 2218)	L (Length)	0.165 \pm 0.008	0.220 \pm 0.008	W (Width)	0.118 \pm 0.008	0.177 \pm 0.008	H (Height)	0.032 \pm 0.006	0.032 \pm 0.006	W2 (Electrode Width)	0.035 \pm 0.004	0.055 \pm 0.004
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<p>PAT4556</p>	<p>Note: Dimensions in inches</p>															

PAT W-Series Part Numbering: Ex: PAT3042-C-10dB-AT*

Product Designator	Metric Size (English)	Impedance Code	Attenuation Value	Attenuation Tolerance	T&R Packaging Quantity *	Tape Orientation
PAT	3042 (1712) 4556 (2218)	C = 50 Ω	Either 3 or 4 digits as required (i.e. "3dB" = 3dB, "10dB" = 10dB)	A B (see electrical section for details)	-B = Bulk -T = 1,000 (see electrical section for offerings)	-H = Ground side (bottom) facing up Leave blank for ground side facing down (normal)

* Note: All part numbers will automatically have a "-LF" appended to the end of them to indicate RoHS compliance/Pb Free (RoHS 6/6).

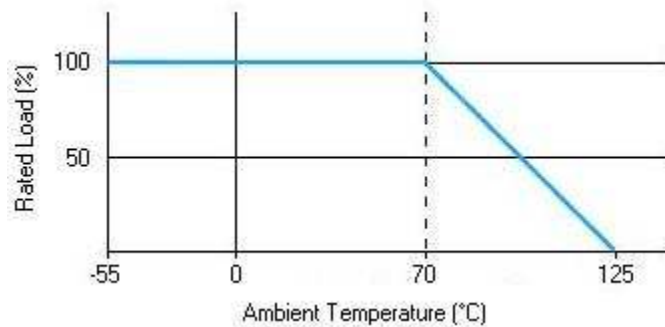
Examples:

Part Number	Metric Size (English size)	Attenuation Value	Attenuation Tolerance	Package Qty	Taping Orientation
PAT3042-C-3dB-AB-H	3042 (1712)	3dB	A (see electrical tables)	B = Bulk (50 pcs MOQ)	H = Ground Facing Up in Tape
PAT3042-C-10dB-AT	3042 (1712)	10dB	A (see electrical tables)	T = 1,000 pcs Tape and Reel	Ground Facing Down in Tape
PAT4556-C-20dB-BB	4556 (2218)	20dB	B (see electrical tables)	B = Bulk (50 pcs MOQ)	Ground Facing Down in Tape

Electrical Specifications:

Type	PAT3042C		PAT4556C		
English Size	1712		2218		
Metric Size	3042		4556		
Frequency Range	DC ~ 10.0 GHz				
Impedance (code)	50Ω (C)				
Attenuation (dB)	0 ~ 10	16, 20	0 ~ 10	16, 20	
Attenuation Tolerance (± dB)	DC~<2GHz	A = ±0.1dB B = ±0.2dB	B = ±0.2dB	A = ±0.1dB B = ±0.2dB	B = ±0.2dB
	2~<5GHz	A = ±0.2dB B = ±0.3dB	B = ±0.3dB	A = ±0.2dB B = ±0.3dB	B = ±0.3dB
	5~10GHz	A = ±0.4dB B = ±0.5dB	B = ±0.5dB	A = ±0.4dB B = ±0.5dB	B = ±0.5dB
VSWR	DC~<2GHz	< 1.1			
	2~<5GHz	< 1.2			
	5~10GHz	< 1.3			
Rated Input Power	250mW		500mW		
Rated Ambient Temperature	70°C				
Packaging (B=Bulk, T=Tape & Reel)	B = 50pcs minimum, increments of 1 or T = 1,000 pcs/reel				

Derating:



Taping Orientation (Standard Orientation - See part numbering section for further details):

