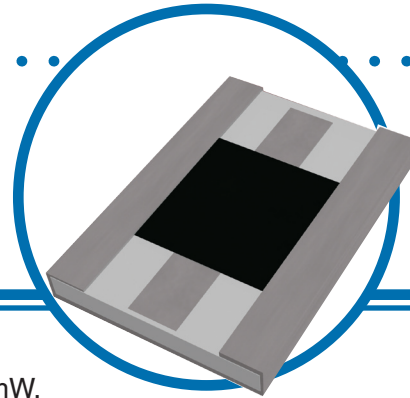


# High Frequency Surface Mount Attenuators

## PAT-W

- RoHS Compliant
- 10GHz operation
- $\pm 50$ ppm/ $^{\circ}$ C absolute TCR
- Wrap Around 100% Sn Terminations
- 50 $\Omega$  impedance available in 2 chip sizes available



The PAT-W series high performance chip attenuator provides excellent high frequency performance at power ratings up to 500mW. The wrap-around construction provides reliable low cost, surface mount assembly. Long term operational stability is achieved from the thin film construction. Typical uses include applications in medical, industrial, and communications.

## Electrical Data

	PAT3042	PAT4556
Power Rating @ 70 $^{\circ}$ C	250mW	500mW
Impedance	50 $\Omega$	
TCR	$\pm 50$ ppm/ $^{\circ}$ C	
Attenuation (dB)	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20	
VSWR	DC to 2GHz = 1.1 2GHz to 5GHz = 1.2 5GHz to 10GHz = 1.3	
Operating Temperature Range	-55 $^{\circ}$ C to +125 $^{\circ}$ C	
Terminations	100% Sn	

## Attenuation Tolerance Data

Attenuation Value	Attenuation Tolerance Code	DC to 2GHz	2GHz to 5GHz	5GHz to 10GHz
0dB	A	+0.1/ -0dB	+0.2/ -0dB	+0.4/ -0dB
0 to 10dB	A	$\pm 0.1$ dB	$\pm 0.2$ dB	$\pm 0.4$ dB
	B	$\pm 0.2$ dB	$\pm 0.3$ dB	$\pm 0.5$ dB
16, 20dB	B	$\pm 0.2$ dB	$\pm 0.3$ dB	$\pm 0.5$ dB

## Environmental Data

	Test Condition	Attenuation		Impedance
		0 to 10dB	16, 20dB	
Short Time Over Load	2.5 x Rated Voltage, 5 sec	$\pm 0.01$ dB	$\pm 0.02$ dB	$\pm 0.2\%$
Load Life	1000 Hours, 70 $^{\circ}$ C	$\pm 0.02$ dB	$\pm 0.04$ dB	$\pm 0.5\%$
Moisture Resistance	1000 hours, 60 $^{\circ}$ C, 95% RH	$\pm 0.02$ dB	$\pm 0.04$ dB	$\pm 0.5\%$
Temperature Cycle	5 Cycles, 125 $^{\circ}$ C High, -55 $^{\circ}$ C Low	$\pm 0.01$ dB	$\pm 0.02$ dB	$\pm 0.2\%$
Resistance to Solder Heat	260 $^{\circ}$ C, 10 sec.	$\pm 0.01$ dB	$\pm 0.02$ dB	$\pm 0.2\%$
Solderability	235 $^{\circ}$ C, 3 sec	>95% coverage		
Insulation Resistance	500V, 1 minute	>1000M $\Omega$		

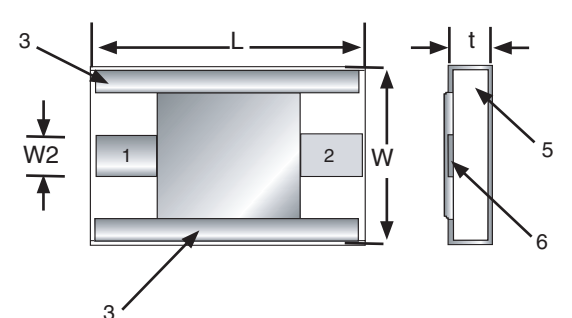
### General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

# High Frequency Surface Mount Attenuators

## Physical Data

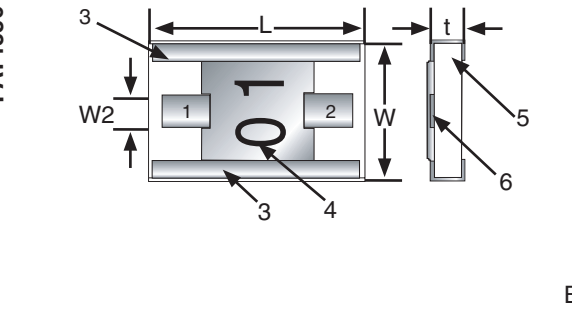
**PAT3042**



Dimensions (mm)	
<b>W2</b>	0.9 ± 0.10
<b>L</b>	4.20 ± 0.20
<b>W</b>	3.02 ± 0.20
<b>t</b>	0.80 ± 0.15

Bottom View

**PAT4556**

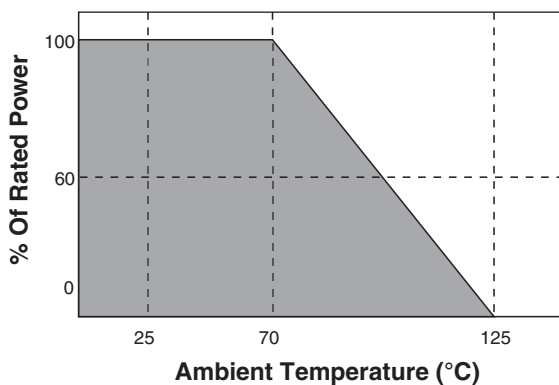


Dimensions (mm)	
<b>W2</b>	1.39 ± 0.1
<b>L</b>	5.6 ± 0.2
<b>W</b>	4.5 ± 0.2
<b>t</b>	0.80 ± 0.15

Bottom View

1, 2: Input and output terminals 3: Ground Terminal 4: Overcoat 5: Alumina substrate 6: Thin film resistor

## Power Derating Curve



## Ordering Data

Prefix ..... **HFR** - **PAT3042WLF** - **50R0** - **3** **A**

Model .....  
 PAT3042WLF = Surface Mount Attenuator with 100% Sn Terminations  
 PAT4556WLF = Surface Mount Attenuator with 100% Sn Terminations

Impedance .....  
 50R0 = 50Ω

Attenuation .....  
 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 20dB

Attenuation Tolerance .....  
 A, B