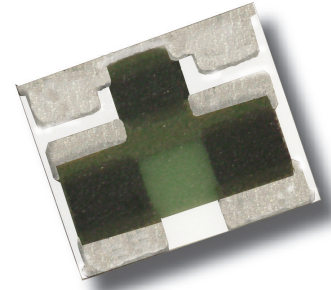


# IMA Series Surface Mount Thick Film Attenuator

IMA Series Custom family surface mount thick film attenuators are compact, high performance devices especially suited to RF and microwave applications. Performance is based on the attenuator operating in a matched continuous 50 ohm system, with proper device mounting and workmanship.



## IMA Series Specifications

Standard Impedance:	50Ω Nominal
VSWR (Max):	1.25:1 up to 4 GHz 1.35:1 @ 4 to 8 GHz 1.50:1 @ 8 to 12 GHz
DC Attenuation Stability:	.0001 dB/ dB/ deg. C *
Power Rating:	2W (metalized baseplate maintained below 100° C)
Operating Temperature:	-55 deg. C to 150 deg. C
Frequency Range:	DC - 12.4 GHz
Standard Case Size:	0.122" X 0.145" X 0.028" Max
Architecture:	Thick Film on 96% Alumina (Al <sub>2</sub> O <sub>3</sub> )

For other substrate thicknesses, sizes and power levels, consult the factory.

### Attenuation Accuracy (DC)

Increment (dB)	Accuracy
1 - 3.5	+/- 0.2dB
4 - 19	+/- 0.3dB
20 - 30	+/- 0.5dB
31 - 40	+/- 1.0dB

**At the circuit level, with proper application of RF principles, these attenuators, and their variations, are capable of operating up to 20 GHz with a manageable VSWR.**

\* Based on TCR and resistor tolerance at DC

### Ordering Information

IMA2314-03D5 (Sample P/N)	
IMAXXXX-XXDX	
Part # (See Reverse)	dB Increment (0 denotes whole value) (5 denotes whole value + .5dB available to 9.5dB)
	dB Whole Value (00-40)

To  
**40dB**

To  
**0.2dB**  
Accuracy

**2W**  
Rated Power

**ims** International  
Manufacturing  
Services, Inc.

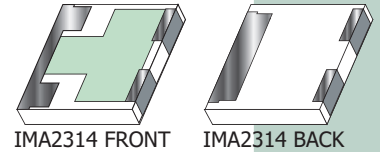
Tel (401) 683-9700  
Fax (401) 683-5571  
e-mail: [ims@ims-resistors.com](mailto:ims@ims-resistors.com)  
<http://www.ims-resistors.com>

*impossible made simple*

**Wraparound Styles**

**IMA2314**

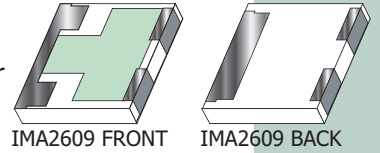
Terminal Style: Full Wraparound  
 Terminal Materials: Platinum Silver with 62/36/2 Tin Lead Silver Solder  
 Attachment: Solder



**IMA2609**



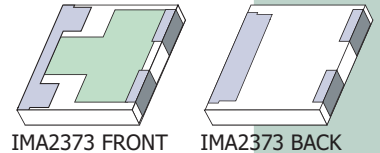
Terminal Style: Full Wraparound  
 Terminal Materials: Platinum Silver with RoHS Compliant 96/4 Tin Silver Solder  
 Attachment: Solder



**IMA2373**



Terminal Style: Full Wraparound  
 Terminal Material: Platinum Silver  
 Attachment: Solder or Epoxy

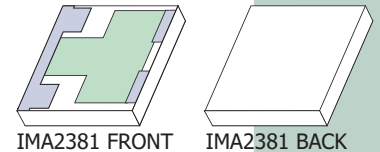


**Single-Sided Styles**

**IMA2381**

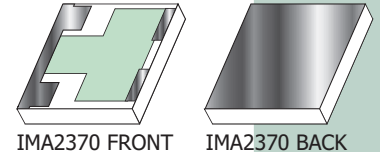


Terminal Style: Single-Sided  
 Terminal Material: Platinum Silver  
 Attachment: Solder or Epoxy



**IMA2370**

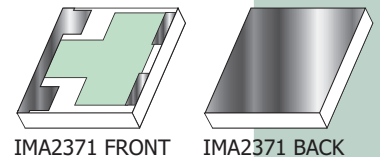
Terminal Style: Single-Sided with Backplane  
 Terminal Materials: Platinum Silver with 62/36/2 Tin Lead Silver Solder  
 Attachment: Solder



**Single-Wrap Style (SG)**

**IMA2371**

Terminal Style: Single-Wrap to Backplane  
 Terminal Materials: Platinum Silver with 62/36/2 Tin Lead Silver Solder  
 Attachment: Solder



**S-Parameters, Mag. / Phase, 6dB T-Pad**  
 1.0 To 10GHz - P/N: IMA2314-06D0  
 mounted to 0.015" thick, 50Ω alumina

FREQ (GHz)	S11 mag	S11 phase	S21 mag	S21 phase	VSWR
1.00	0.020	-91.995	0.501	-1.799	1.040
2.10	0.041	-92.998	0.501	-3.780	1.086
3.02	0.059	-94.046	0.500	-5.428	1.126
4.12	0.081	-95.361	0.499	-7.400	1.175
5.04	0.098	-96.473	0.497	-9.038	1.218
5.96	0.116	-97.588	0.496	-10.670	1.263
7.06	0.137	-98.926	0.494	-12.617	1.317
7.98	0.154	-100.035	0.492	-14.230	1.365
9.08	0.175	-101.358	0.489	-16.153	1.423
10.0	0.192	-102.451	0.486	-17.744	1.474



**Indicates RoHS Compliant Part**



*Non-Magnetic*

**impossible made simple**

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