



**THE DATASHEET OF
MAT10030**



Attenuator DIE

DC - 20 GHz



MAT10xxx Series
Rev. V5

Features

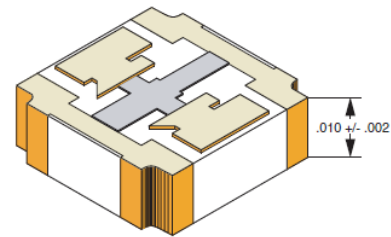
- Medium Power Handling 2 W CW
- Flat Response from DC to 20 GHz
- Return Loss:
 - >18 dB DC to 12 GHz
 - >16 dB 13 to 20 GHz
- Space Saving Footprint:
0.030" x 0.030" (0.762 x 0.762 mm)
- Very Good Stability Over Temperature
(TRC <100 PPM)
- Ground Wrap to Top
(No ground bonding required)
- RoHS* Compliant

Description

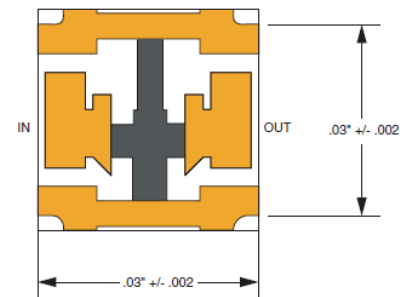
These fixed attenuator chips are fabricated using our state of the art thin film metallization and advanced photolithography technology.

All devices are available in chip form with a metalized ground connection on the back. This ground is wrapped around on the four corners of the chip so additional ground bonding ribbon is not required.

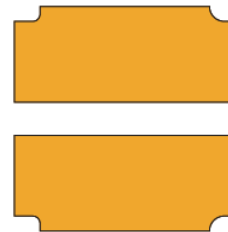
The chips may be attached using conductive epoxy or solder preform. Gold contacts on the input and output pads make assembly, using standard bonding equipment, fast and reliable. Custom values and configuration available on request.



Front to back metallization in 4 places



Bonding pad sizes and resistor outline may differ from value to value.



Back Side

Electrical Specifications: $T_A = +25^\circ\text{C}$

Part Number	Attenuation (dB)	Insertion Loss (dB)	Return Loss (dB)
MAT10000	0	+/-0.30	>18
MAT10010	1	+/-0.30	>18
MAT10020	2	+/-0.30	>18
MAT10030	3	+/-0.30	>18
MAT10040	4	+/-0.30	>18
MAT10050	5	+/-0.30	>18
MAT10060	6	+/-0.35	>18
MAT10070	7	+/-0.35	>18
MAT10080	8	+/-0.35	>18

CONTINUED

1 * Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Electrical Specifications: T_A = +25°C

Part Number	Attenuation (dB)	Insertion Loss (dB)	Return Loss (dB)
MAT10090	9	+/-0.35	>18
MAT10100	10	+/-0.35	>18
MAT10110	11	+/-0.40	>18
MAT10120	12	+/-0.40	>18
MAT10130	13	+/-0.40	>18
MAT10140	14	+/-0.40	>18
MAT10150	15	+/-0.40	>18
MAT10160	16	+/-0.50	>18
MAT10170	17	+/-0.50	>18
MAT10180	18	+/-0.50	>18
MAT10190	19	+/-0.50	>18
MAT10200	20	+/-0.50	>18
MAT10210	21	+/-0.60	>18
MAT10220	22	+/-0.60	>18
MAT10230	23	+/-0.60	>18
MAT10240	24	+/-0.60	>18
MAT10250	25	+/-0.60	>18
MAT10260	26	+/-1.00	>18
MAT10270	27	+/-1.00	>18
MAT10280	28	+/-1.00	>18
MAT10290	29	+/-1.00	>18
MAT10300	30	+/-1.00	>18

Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
RF Incident Power	33 dBm
Operating Temperature	-55°C to +150°C
Storage Temperature	-65°C to +150°C
Assembly Temperature	+280°C for 10 seconds

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

2

MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

MACOM Technology Solutions Inc. ("MACOM"). All rights reserved.

These materials are provided in connection with MACOM's products as a service to its customers and may be used for informational purposes only. Except as provided in its Terms and Conditions of Sale or any separate agreement, MACOM assumes no liability or responsibility whatsoever, including for (i) errors or omissions in these materials; (ii) failure to update these materials; or (iii) conflicts or incompatibilities arising from future changes to specifications and product descriptions, which MACOM may make at any time, without notice. These materials grant no license, express or implied, to any intellectual property rights.

THESE MATERIALS ARE PROVIDED "AS IS" WITH NO WARRANTY OR LIABILITY, EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHT, ACCURACY OR COMPLETENESS, OR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View MAT10030 on WIN SOURCE](#)
- ⊖ [M/A-Com Technology Solutions](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management