

MMP7060 - MMP7069 Series

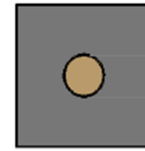


High Power Switching and Attenuation Silicon PIN Diodes

Rev. V1

Features

- Fast Switching
- Low Series Resistance
- Low Junction Capacitance
- Low Thermal Resistance
- RoHS* Compliant



Consult Factory for other package styles.

Description

The MMP7060 - 69 Series of PIN diodes are fast switching, low series resistance, low capacitance PIN diode chips. These diodes are also available packaged in several other package styles. The low junction capacitance, thin I-layer and low series resistances combine to produce outstanding insertion loss, isolation and switching time. The low thermal resistance enables these devices to safely handle moderately high power signals in high frequency switching applications. These rugged devices are capable of reliable operation in all military, commercial and industrial applications.

This series of PIN diodes are designed to be used in moderate peak and average power switch applications which operate at high frequencies and require low switching time. These diodes performs exceptionally well from UHF through microwave frequencies.

Environmental Capabilities

The MMP706x-11 Series of PIN diodes are capable of meeting the environmental requirements of MIL-STD-750 and MIL-STD-883.

Static Sensitivity

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these (HBM) Class 0 devices.

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

Model	Reverse Voltage Breakdown ¹	Junction Capacitance ²	Minority Carrier Lifetime ³	Theta	Series Resistance ⁴	Series Resistance	Series Resistance
	(V_{BR})	(C_J)	(T_L)	(θ_{JC})	@ 1 mA (R_S)	@ 10 mA (R_S)	@ 100 mA (R_S)
	V	pF	ns	$^\circ\text{C}/\text{W}$	Ω	Ω	Ω
	Min.	Max.	Typ.	Max.	Max.	Max.	Max.
MMP7060-11	250	0.05	1.0	20	25.0	10.0	2.0
MMP7061-11		0.08	1.0	20	20.0	8.0	1.5
MMP7062-11		0.10	1.0	20	15.0	6.0	1.2
MMP7063-11		0.20	1.0	15	8.0	3.5	1.0
MMP7064-11		0.30	1.5	15	6.0	2.0	0.8

1. Reverse Breakdown Voltage measured at 10 μA .
2. Junction Capacitance measured at 50 V, 1 MHz.
3. Minority Carrier lifetime measured with $I_F = 10 \text{ mA}$, $I_R = 10 \text{ mA}$.
4. Series Resistance is measured at 1 MHz using transmission loss techniques.

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

MMP7060 - MMP7069 Series



High Power Switching and Attenuation Silicon PIN Diodes

Rev. V1

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

Model	Reverse Voltage Breakdown ¹ (V_{BR})	Junction Capacitance ² (C_J)	Minority Carrier Lifetime ³ (T_L)	Theta (θ_{JC})	Series Resistance ⁴ @ 1 mA (R_S)	Series Resistance @ 10 mA (R_S)	Series Resistance @ 100 mA (R_S)
	V	pF	ns	$^\circ\text{C/W}$	Ω	Ω	Ω
	Min.	Max.	Typ.	Max.	Max.	Max.	Max.
MMP7065-11	500	0.08	1.5	15	40.0	8.0	1.5
MMP7066-11		0.10	1.5	15	15.0	5.0	1.2
MMP7067-11		0.20	1.5	12	10.0	4.0	1.0
MMP7068-11		0.30	2.0	10	8.0	3.5	0.8
MMP7069-11		0.50	2.0	10	6.0	2.0	0.7

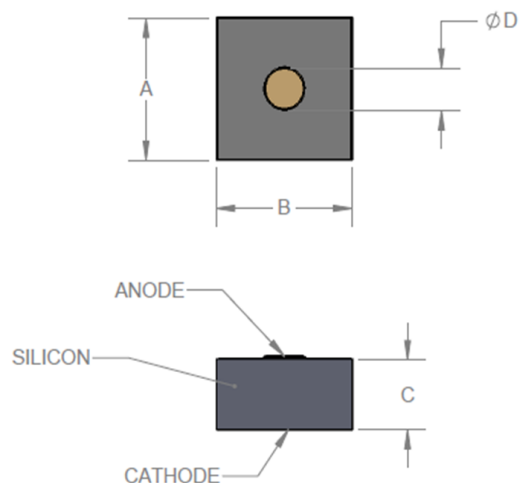
Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-55 $^\circ\text{C}$ to +150 $^\circ\text{C}$
Storage Temperature	-65 $^\circ\text{C}$ to +200 $^\circ\text{C}$
Assembly Temperature	<300 $^\circ\text{C}$ for 5 seconds

Assembly Instructions

Die attach of MMP706x silicon PIN diode chips may be accomplished with conductive epoxy or a eutectic solder such as Au(80%)/Sn(20%) or Au(88%)/Ge(12%). Electrical connection to the cathode may be made with a Au wire or ribbon, utilizing thermo compression or thermosonic bonding. Care should be exercised to not employ excessive pressure or ultrasonic energy while wire/ribbon bonding to avoid physical damage to the die.

CS11



Dimensions (inches)

Dimension	Min.	Nom.	Max.
A	0.012	0.013	0.014
B	0.012	0.013	0.014
C	0.004	0.005	0.006
D	0.003	0.004	0.005

MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE 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.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А