

## Voltage Ratings and Model Numbers

Voltage Rating	MA4P4000 Series	MA4P4300 Series	MA4P7000 Series	MA4P7100 Series
100 Volts	MA4P4001	MA4P4301	MA4P7001	MA4P7101
200 Volts	MA4P4002	MA4P4302	MA4P7002	MA4P7102
400 Volts	—	—	—	MA4P7104
600 Volts	MA4P4006	—	MA4P7006	—

## Maximum Ratings

Parameter	Absolute Maximum
DC Reverse Voltage	Voltage Rating
Operating and Storage Temperature	-65°C to +175°C
Installation Temperature	+250°C, 30 Seconds

## Electrical Specifications @ +25°C

Parameter	Symbol	Condition	MA4P4000 Series	MA4P4300 Series	MA4P7000 Series	MA4P7100 Series
Series Resistance (Max)	$R_S$	100 mA, 100 MHz	0.5 $\Omega$	1.0 $\Omega$	0.8 $\Omega$	0.5 $\Omega$
Total Capacitance (Max)	$C_T$	100 V, 1 MHz	2.2 pF	2.0 pF	0.7 pF	1.0 pF
Parallel Resistance (Min)	$R_P$	100 V, 100 MHz	20 k $\Omega$	50 k $\Omega$	200 k $\Omega$	100 k $\Omega$
Carrier Lifetime (Min)	$T_L$	10 mA	6 $\mu$ s	6 $\mu$ s	3 $\mu$ s	2.5 $\mu$ s
Forward Voltage (Max)	$V_F$	100 mA	1.0 V	1.2 V	1.0 V	1.0 V
Reverse Current (Max)	$I_R$	Voltage Rating	1 $\mu$ A	1 $\mu$ A	1 $\mu$ A	1 $\mu$ A
I-Region Width (Nominal)	$W$	—	175 $\mu$ m	300 $\mu$ m	175 $\mu$ m	100 $\mu$ m

## Power Dissipation and Thermal Resistance Ratings

Package Style	Condition	MA4P4000		MA4P4300		MA4P7000		MA4P7100	
		$P_D$	$\theta_{JC}$	$P_D$	$\theta_{JC}$	$P_D$	$\theta_{JC}$	$P_D$	$\theta_{JC}$
B (Axial Leaded)	1/4 inch Total Length to 25°C Free Air Rating	12 W	12.5°C/W	10 W	15°C/W	5 W	30°C/W	6 W	25°C/W
		2.5 W	—	2.5 W	—	1.5 W	—	1.5 W	—
F (SMQ Surface Mount)	25°C Contacts	7.5 W	20°C/W	5 W	30°C/W	3 W	50°C/W	3 W	50°C/W
Both B and F	Single 1 $\mu$ s pulse	100 kW	—	100 kW	—	15 kW	—	15 kW	—
Both B and F	Single 100 $\mu$ s pulse	5 kW	.03°C/W	5 kW	.03°C/W	300 W	0.5°C/W	300 W	0.5°C/W

## Environmental Ratings

HIPAX PIN diodes may be supplied with JAN TX level screening. The table lists some of the MIL-STD-750 environmental tests HIPAX PIN diodes are designed to meet.

Test	MIL-STD-750 Method	Description
High Temperature Storage	1031	+175°C, 250 Hours
Temperature Shock	1051	-65°C to +175°C, 20 Cycles
HTRB	1038	809b VR, +150°C, 96 Hours
Moisture Resistance	1021	
Fine Leak	1071 Cond. H	1 x 10 <sup>-7</sup> CC/Sec
Constant Acceleration	2006	20,000 G's
Vibration Fatigue	2046	20,000 G's
Solderability	2026	
Lead Fatigue	2036.3 Cond. E	3 cycles, 8 oz., 90°, Bent at Body
Tension	2036.3 Cond. A	2 lbs., 30 seconds

## Ordering Information

HIPAX PIN diodes are designated by MA4P followed by four digits which indicate the voltage rating and series. A package style letter suffix follows.

To purchase:

MA4P4000 Series, 600V, SMQ package (F)

Order Model No.: MA4P4006F

The same unit in an axial lead package (B) is: MA4P4006B.

Specifications Subject to Change Without Notice.

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