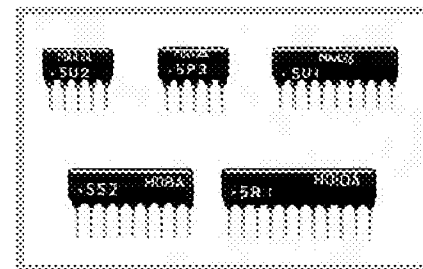


Diode Arrays

High-speed switching diode arrays and high voltage-withstand diode arrays are of NICHICON's standard series. They are combined to be conveniently used for both binary and decimal systems. High-speed series is ideal for computer peripherals, control boards and general electronic appliances. Besides, high voltage-withstand series is ideal for plasma displays, relay surge-preventive circuits.

Both of these series are in stock for prompt delivery. Any special requirements with customer's particular circuits will be also welcome. Please consult us for the details.

(Samples for the items listed below are not always available on stock. Please contact our sales office for details together with your specific requirements.)



■ High-speed switching diode array series

■ Absolute maximum ratings *

Items	Symbol	Ratings
Peak reverse voltage	V_{RM}	40V
DC reverse voltage	V_R	40V
Surge current (1 μ s)	I_{FSM}	4.0A
Peak forward current	I_{FM}	300mA
Average rectified current	I_o	100mA
Storage temperature	T_{stg}	-25 ~ +85°C

*100mA for simultaneous energizing.

*Maximum Current value applicable to each diode.

■ High voltage-withstand series

■ Absolute maximum ratings *

Items	Symbol	Ratings
Peak reverse voltage	V_{RM}	220V
Reverse DC voltage	V_R	200V
Surge current (1sec.)	I_s	1A
Peak forward current	I_{FM}	600mA
Average rectified current	I_o	200mA
Storage temperature	T_{stg}	-25 ~ +85°C

*Maximum Current value applicable to each diode.

■ Electrical characteristics

$T_a : +25^\circ\text{C}$

Items	Symbol	Conditions	Rating			Unit
			Min.	Typ.	Max.	
Reverse current	I_R	$V_R=40\text{V}$	—	—	0.5	μA
Forward voltage	V_{F1}	$I_F=10\text{mA}$	—	0.7	1.0	V
Forward voltage	V_{F2}	$I_F=50\text{mA}$	—	0.79	1.0	V
Forward voltage	V_{F3}	$I_F=100\text{mA}$	—	0.85	1.2	V
Reverse recovery time	t_{rr}	$I_F=10\text{mA}$, $V_R=6\text{V}$	—	—	4.0	ns

■ Electrical characteristics

$T_a : +25^\circ\text{C}$

Items	Symbol	Conditions	Rating			Unit
			Min.	Typ.	Max.	
Reverse current	I_R	$V_R=110\text{V}$	—	—	1.0	mA
Forward voltage	V_F	$I_F=50\text{mA}$	—	—	1.3	V
Reverse voltage	V_R	$I_R=100\mu\text{A}$	220	—	—	V
Time required for recovery from reverse voltage or current	t_{rr}	$I_F=I_R=30\text{mA}$ $R_L=100\Omega$	—	—	100	ns

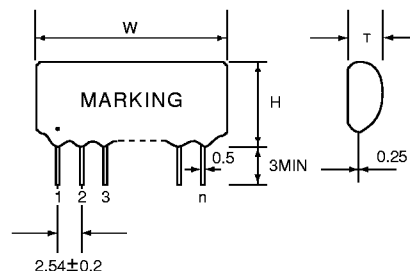
■ Series List

Code	Type	Number of diodes	Common electrode	Dimensions (mm Max.)			No. of Pins n	Circuit diagram
				W	H	T		
ZHMA0423	MA423	4	Cathode	14	9	3.5	5	
ZHMA0424	MA424		Anode					
ZHMA0425	MA425	8	Cathode	24	9	3.5	9	
ZHMA0426	MA426		Anode					
ZHMA0427	MA427	10	Cathode	29	9	3.5	11	
ZHMA0428	MA428		Anode					
ZHMA0429	MA429	5	Isolated	27	9	3.5	10	
ZHMA0430	MA430	4	Isolated	21.5	9	3.5	8	
ZHMA0431	MA431	6	Cathode	19	9	3.5	7	
ZHMA0432	MA432		Anode					

■ Series List

Code	Type	Number of diodes	Common electrode	Dimensions (mm Max.)			No. of Pins n	Circuit diagram
				W	H	T		
ZHLA0650	HD-4K	4	Cathode	14	9	3	5	
ZHLA0651	HD-4A		Anode					
ZHLA0652	HD-8K	8	Cathode	24	9	3	9	
ZHLA0653	HD-8A		Anode					
ZHLA0654	HD-10K	10	Cathode	29	9	3	11	
ZHLA0655	HD-10A		Anode					
ZHLA0656	HD-4S	4	Isolated	21.5	9	3	8	
ZHLA0657	HD-5S	5	Isolated	27	9	3	10	

■ Drawing



Diode Mini Arrays

■ Height.....5mm Max.

The mounting height of electronic device can be made substantially low-profile and compact.

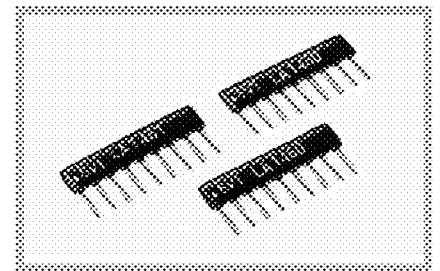
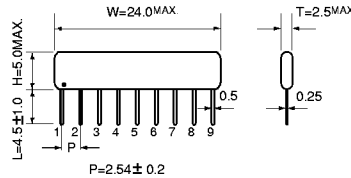
■ Thickness.....2.5mm Max.

Diode arrays can be placed in a row with 2.54mm pitch, and high density mounting is available at a rate of one diode per 0.1 sq. inch.

■ Electrical characteristics

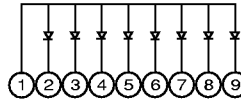
Items	Symbol	Conditions	Rating			Unit
			Min.	Typ.	Max.	
Reverse current	I_R	$V_R=35V$	—	—	0.5	μA
Forward voltage	V_{F1}	$I_F=10mA$	—	0.75	1.0	V
Forward voltage	V_{F2}	$I_F=50mA$	—	0.90	1.1	V
Forward voltage	V_{F3}	$I_F=100mA$	—	0.95	1.2	V
Reverse recovery time	t_{rr}	$I_F=10mA, V_R=6V$	—	—	4.0	ns

■ Drawing

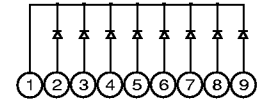


■ Circuit diagram

LA1460 (Code ZHLA 1460)



LA1461 (Code ZHLA 1461)



Any particular specifications are also available upon request.

Diode Arrays for Specific Layout

Nichicon supplies many variations of diode arrays making effective use of our technology.

■ Absolute maximum ratings*

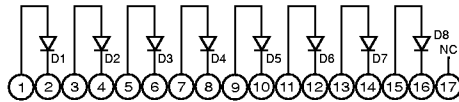
Items	Symbol	Rating
Peak reverse voltage	V_{RM}	40V
DC reverse voltage	V_R	40V
Surge current (1 μ s)	I_{FSM}	4.0A
Peak forward current	I_{FM}	300mA
Average rectified current	I_o	100mA
Storage temperature	t_{stg}	-25 ~ +85°C

*Maximum Current value applicable to each diode.

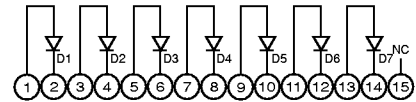
■ Electrical characteristics

Items	Symbol	Conditions	Rating			Unit
			Min.	Typ.	Max.	
Reverse current	I_R	$V_R=40V$	—	—	0.5	μA
Forward voltage	V_{F1}	$I_F=10mA$	—	0.7	1.0	V
Forward voltage	V_{F2}	$I_F=50mA$	—	0.79	1.0	V
Forward voltage	V_{F3}	$I_F=100mA$	—	0.85	1.2	V
Reverse recovery time	t_{rr}	$I_F=10mA, V_R=6V$	—	—	4.0	ns

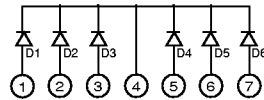
MA2906 (Code ZHMA 2906) 23.5W×16H×6T(mm) (Fig. B)



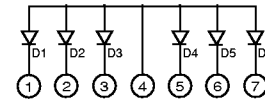
MA2907 (Code ZHMA2907) 21W×16H×6T(mm) (Fig. B)



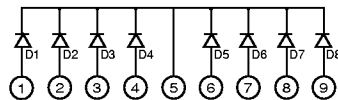
MA2901 (Code ZHMA2901) 19W×9H×3.5T(mm) (Fig. A)



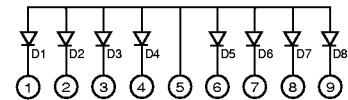
MA2902 (Code ZHMA2902) 19W×9H×3.5T(mm) (Fig. A)



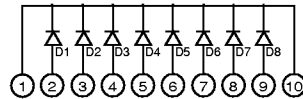
MA2911 (Code ZHMA2911) 24W×9H×3.5T(mm) (Fig. A)



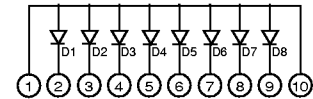
MA2912 (Code ZHMA2912) 24W×9H×3.5T(mm) (Fig. A)



MA2913 (Code ZHMA2913) 26.5W×9H×3.5T(mm) (Fig. A)



MA2914 (Code ZHMA2914) 26.5W×9H×3.5T(mm) (Fig. A)



■ Drawing

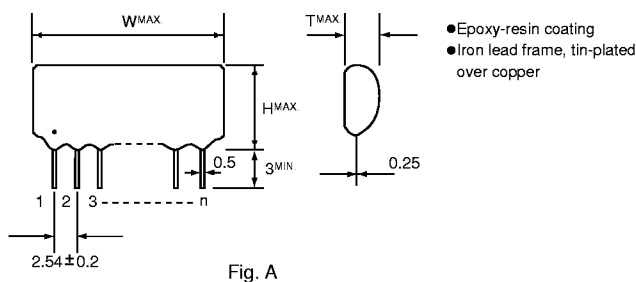


Fig. A

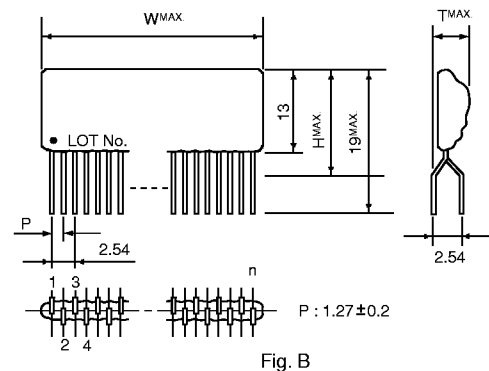
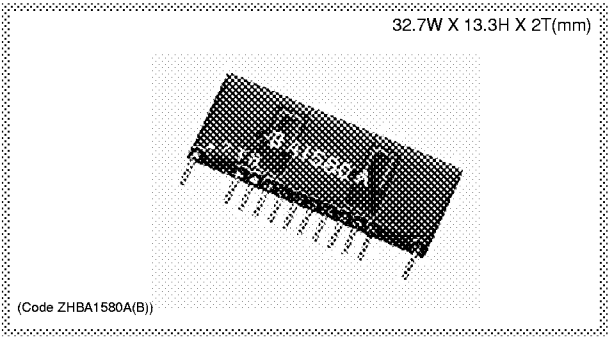


Fig. B

Cautions : Full care to be taken when solder flow applied to those miniature products.

500MHz Low Pass Filter

This will guarantee 45W of input power, with quite small loss and large attenuation at the insertion.
The package is very thin with small installation area.



■ Electrical characteristics($Z_{in}=Z_{out}=50\Omega$)

Type	Insertion Loss(dB) $f_0=435\text{MHz}$	Attenuation(dB)	
		$2 \times f_0$	$3 \times f_0$
BA1580A	-0.3	-40	-46
BA1580B		-52	

BA1580 is constructed so tight that it is not affected by outside atmospheric conditions.

■ Absolute maximum ratings

Items	Symbol	Ratings	Conditions
Input Power	P_{in}	45 (W)	$V_{SWR} \leq 3$, $Z_{in}=50\Omega$
Total Loss	P_t	3 (W)	$f=430 \sim 440\text{MHz}$
Case Temperature	T_h	+150 ($^{\circ}\text{C}$)	Testing After 20min
Storage Temperature	T_{stg}	-40 ~ +150 ($^{\circ}\text{C}$)	
VSWR	VSWR	3MAX	

