

8706 DUAL 5-INPUT DIODE EXPANDER ELEMENT

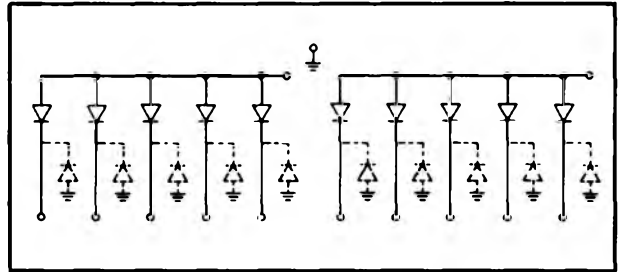
8731 QUAD 2-INPUT DIODE EXPANDER ELEMENT

The 8706 Dual 5-Input and the 8731 Quad 2-Input Diode Expander Elements complete the full range of diode input expansion capacity for the 8400 series expandable gate (8415, 8416 and 8417).

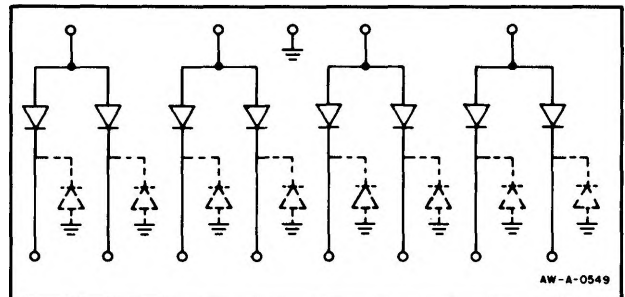
The 8706 and the 8731 provide optimum flexibility for the most efficient utilization of pin and package configurations in achieving a desired number of additional input term and input combinations.

Applications information on the 8706 and 8731 is included in Section 4 of this handbook.

BASIC CIRCUIT SCHEMATIC 8706



BASIC CIRCUIT SCHEMATIC 8731

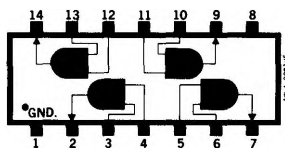


AW-A-0549

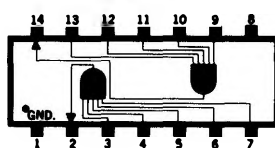
ELECTRICAL CHARACTERISTICS (NOTES: 1, 2, 3, 4, 5, 6, 9)

ACCEPTANCE TEST SUB-GROUP	CHARACTERISTIC	LIMITS			TEST CONDITIONS					
		MIN.	MAX.	UNITS	TEMP. S8731	TEMP. N8731	DRIVEN INPUT	OTHER INPUTS	OUTPUTS	NOTES
A-4	"1" INPUT CURRENT		25	μ A	+125°C	+75°C	4.5V	0V	0V	
C-1	DIODE FORWARD VOLTAGE		0.95	V	-55°C	0°C	0V	Open	1.2mA	
A-3			0.85	V	+25°C	+25°C	0V	Open	1.2mA	
C-1	INPUT VOLTAGE RATING	5.5	0.68	V	+125°C	+75°C	0V	Open	1.2mA	
A-2					V	+25°C	+25°C	10 μ A	Open	0V
C-2	INPUT CAPACITANCE		3	pf	+25°C	+25°C	2.0V		0V	7
C-2	DIODE RECOVERY TIME		4	ns	+25°C	+25°C	\pm 2mA	Open		8

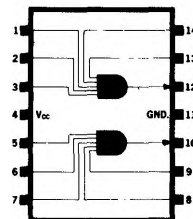
8731A



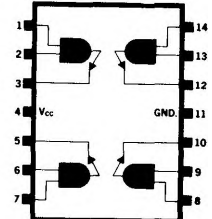
8706A



8706J



8731J



Notes:

- All voltage and capacitance measurements are referenced to the ground terminal. Terminals not specifically referenced are left electrically open.
- All measurements are taken with ground pin tied to zero volts.
- Positive current flow is defined as into the terminal referenced.
- Positive NAND Logic Definition: "UP" Level = "1", "DOWN" Level = "0".
- Precautionary measures should be taken to ensure current limiting in accordance with maximum ratings should the isolation diodes become forward biased.
- Measurements apply to each diode cluster independently.
- Capacitance as measured on Boonton Electronic Corporation Model 75A-S8 Capacitance Bridge or equivalent. $f = 1\text{Mc}$, $V = 25\text{mVrms}$. All pins not specifically referenced are tied to guard for capacitance tests. Output pins are left open.
- Recovery to 0.2mA, Loop Resistance = 100 ohms. Measure with Tektronix Type 291 Diode Switching Time Tester.
- Manufacturer reserves the right to make design and process changes and improvements.