



DMSMS NOTICE

DIMINISHING MANUFACTURING SOURCES AND MATERIAL SHORTAGES

1. TITLE ALLEGRO MICROSYSTEMS INC. PRODUCT DISCONTINUANCE		2. DOCUMENT NUMBER X1-D-03-136A	
		3. DATE (Year, Month, Day) 16 MAY 2003	
4. MANUFACTURER NAME AND ADDRESS ALLEGRO MICROSYSTEMS INC. (FORMERLY SPRAGUE ELECTRIC COMPANY) 115 NORTHEAST CUTOFF WORCESTER, MA 01613-2036		5. MANUFACTURER POINT OF CONTACT (NAME) NOT AVAILABLE	
		6. MANUFACTURER POINT OF CONTACT TELEPHONE NOT AVAILABLE	
7. CAGE CODE (H4) 0CVK3	8. MANUFACTURER FINAL ORDER DATE NOT AVAILABLE	9. MANUFACTURER PART NUMBER SEE DOCUMENT	10. BASE PART NOT AVAILABLE
11. DOCUMENT ORIGINATOR GIDEP OPERATIONS CENTER PO BOX 8000 CORONA, CA 91718-8000		12. GOVERNMENT PART NUMBER NOT AVAILABLE	13. SPECIFICATION NUMBER NOT AVAILABLE
		14. TYPE DESIGNATOR NOT AVAILABLE	15. MODEL NUMBER NOT AVAILABLE
		16. NATIONAL STOCK NUMBER (NSN) SEE DATABASE	17. DRAWING NUMBER NOT AVAILABLE
18. COMMENTS THIS AMENDMENT CONTAINS ADDITIONAL INFORMATION RECEIVED FROM THE DEFENSE SUPPLY CENTER COLUMBUS (DSCC). PLEASE NOTIFY DSCC OF YOUR REQUIREMENTS BY JUNE 25, 2003. PAGE 1 THROUGH PAGE 13 CONTAIN ORIGINAL DOCUMENT. PAGE 14 AND PAGE 15 CONTAIN AMENDMENT "A". THIS AMENDMENT IS COMPLETE. ALLEGRO MICROSYSTEMS INC. (FORMERLY SPRAGUE ELECTRIC COMPANY) HAS ANNOUNCE DISCONTINUANCE OF LISTED PART NUMBER SERIES UHD-400, UHD-400-1 AND UHD-500 POWER AND RELAY DRIVERS. NO FINAL ORDER DATE AVAILABLE.			
FOR GOVERNMENT AGENCIES USE ONLY			
19. FEDERAL GOVERNMENT NAME AND ADDRESS DEFENSE SUPPLY CENTER COLUMBUS (DSCC) 3990 BROAD ST. COLUMBUS, OH 43216-5000		20. FEDERAL GOVERNMENT POINT OF CONTACT NAME ROBERT PEYTON, DSCC-CD	
		21. FEDERAL GOVERNMENT POINT OF CONTACT TELEPHONE (614) 692-7424 DSN 850-7424	
22. CASE NUMBER 2003-102	23. USER RESPONSE DEADLINE DATE 25 JUNE 2003	24. ROUTING IDENTIFIER CODE SEE DATABASE	
25. SOLUTION /STATUS CODE LIFE OF TYPE BUY	26. USERS SEE DATABASE		

**SERIES UHD-400, UHD-400-1, AND UHD-500
POWER AND RELAY DRIVERS**

MIL-STD-883 Compliant

FEATURES

- 500 mA Output Current-Sink Capability
- Four Logic Types
- Pinning Compatible with 54/74 Logic Series
- High-Voltage Output:
 - 100 V Series UHD-500
 - 70 V Series UHD-400-1
 - 40 V Series UHD-400

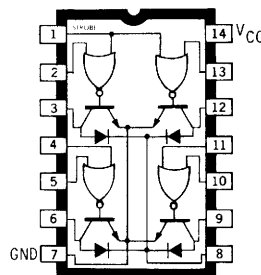
COMBINING LOGIC GATES and high-current switching transistors, these hermetically packaged, monolithic devices are used to drive incandescent or LED lamps, relays, solenoids, small dc motors, and other peripheral power loads in military and aerospace applications. Drivers with internal transient-suppression diodes are recommended for use with inductive loads.

Three minimum output-breakdown voltage ratings are available: 40 V (Series UHD-400), 70 V (Series UHD-400-1), and 100 V (Series UHD-500). All devices can sink 250 mA continuous, or 500 mA peak.

The inputs are compatible with standard TTL and CMOS logic levels. Four of eight available logic/output configurations are shown at right.

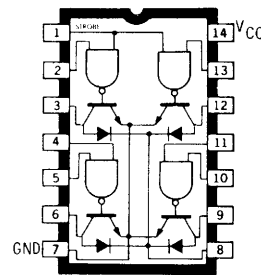
These devices are supplied in ceramic/metal side-brazed 14-pin hermetic packages. The package conforms to the dimensional requirements of MIL-M-38510 and is rated for operation over the full military temperature range of -55°C to $+125^{\circ}\text{C}$. Power and relay drivers in flat-pack packages, Series UHC-400, UHC-400-1, and UHC-500, continue to be available on special order.

Monolithic construction enables cost-effective and reliable systems design. Reverse-bias burn-in and 100% high-reliability screening to MIL-STD-883, Class B, is standard for all devices.



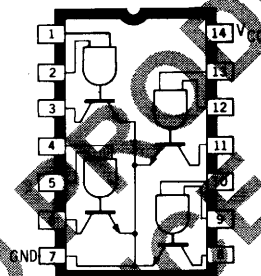
Dwg. No. A-9130B

**UHD-403
UHD-403-1
UHD-503**



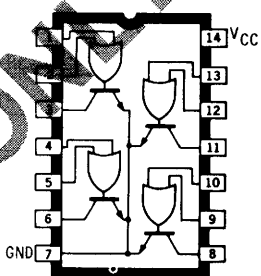
Dwg. No. A-7880B

**UHD-406
UHD-406-1
UHD-506**



Dwg. No. A-12,388

**UHD-408
UHD-408-1
UHD-508**



Dwg. No. A-12,389

**UHD-432
UHD-432-1
UHD-532**

Device Part Number Designation

Part Numbers*			Function
400	400-1	500	Quad 2-Input AND
402	402-1	502	Quad 2-Input OR
403	403-1	503	Quad OR for Inductive Loads
406	406-1	506	Quad AND for Inductive Loads
407	407-1	507	Quad NAND for Inductive Loads
408	408-1	508	Quad 2-Input NAND
432	432-1	532	Quad 2-Input NOR
433	433-1	533	Quad NOR for Inductive Loads

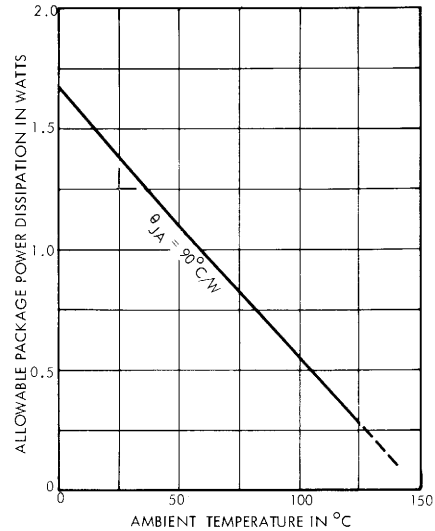
*Complete part number includes the prefix UHD.

**SERIES UHD-400, UHD-400-1, AND UHD-500
POWER AND RELAY DRIVERS**

ABSOLUTE MAXIMUM RATINGS

Supply Voltage, V_{CC}	7 V
Output Voltage, V_{IN}	5.5 V
Output Off-State Voltage, V_{OFF}	
Series UHD-400	40 V
Series UHD-400-1	70 V
Series UHD-500	100 V
Output On-State Sink Current, I_{ON}	
(one driver)	500 mA
(total package)	1 A
Suppression Diode Off-State Voltage, V_R	
Series UHD-400	40 V
Series UHD-400-1	70 V
Series UHD-500	100 V
Suppression Diode On-State Current, I_F	500 mA
Operating Free-Air Temperature Range, T_A	-55°C to +125°C
Storage Temperature Range, T_S	-65°C to +150°C

ALLOWABLE PACKAGE POWER DISSIPATION



Dwg. No. A-10.884B

RECOMMENDED OPERATING CONDITIONS

	Min.	Nom.	Max.	Units
Supply Voltage (V_{CC})	4.5	5.0	5.5	V
Operating Temperature Range	-55	+25	+125	°C
Current into Any Output (ON State)	—	—	250	mA

SWITCHING CHARACTERISTICS at $T_A = +25^\circ\text{C}$, $V_{CC} = 5.0\text{ V}$

Characteristic	Series	Test Conditions (Note 3)	Limits			Units
			Min.	Typ.	Max.	
Turn-On Delay Time (t_{pd0})	UHD-400	$V_S = 40\text{ V}$, $R_L = 265\Omega$ (6 W)	—	200	500	ns
	UHD-400-1	$V_S = 70\text{ V}$, $R_L = 465\Omega$ (10 W)	—	200	500	ns
	UHD-500	$V_S = 100\text{ V}$, $R_L = 670\Omega$ (15 W)	—	200	500	ns
Turn-Off Delay Time (t_{pd1})	UHD-400	$V_S = 40\text{ V}$, $R_L = 265\Omega$ (6 W)	—	300	750	ns
	UHD-400-1	$V_S = 70\text{ V}$, $R_L = 465\Omega$ (10 W)	—	300	750	ns
	UHD-500	$V_S = 100\text{ V}$, $R_L = 670\Omega$ (15 W)	—	300	750	ns

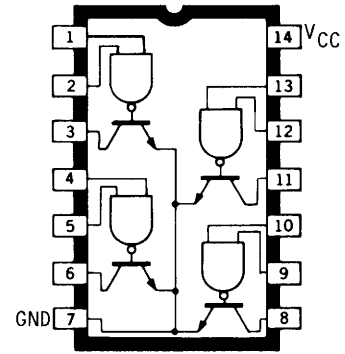
NOTES:

1. Each input tested separately.
2. Voltage values shown in the test-circuit waveforms are with respect to network ground terminal.
3. $C_i = 15\text{ pF}$. Capacitance value specified includes probe and test fixture capacitance.

INPUT PULSE CHARACTERISTICS

$V_{in(0)} = 0\text{ V}$	$t_f \leq 7.0\text{ ns}$	$t_p = 1.0\text{ }\mu\text{s}$
$V_{in(1)} = 3.5\text{ V}$	$t_r \leq 14\text{ ns}$	PRR = 500 kHz

UHD-400, UHD-400-1, UHD-500 Quad 2-Input AND Power Drivers



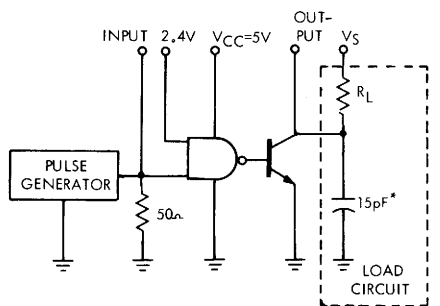
Dwg. No. A-7606

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

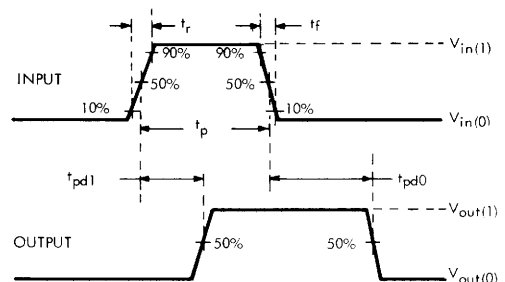
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions			Limits				
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-400	4.5 V	2.0 V	2.0 V	40 V	—	—	100	μA
			UHD-400-1	4.5 V	2.0 V	2.0 V	70 V	—	—	100	μA
			UHD-500	4.5 V	2.0 V	2.0 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.0	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	0 V	0 V	—	—	17.5	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Each input is tested separately.



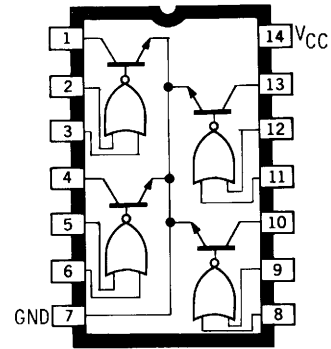
Dwg. No. A-7876E



Dwg. No. A-7628C

*Includes probe and test fixture capacitance.

**UHD-402, UHD-402-1, UHD-502
Quad 2-Input OR Power Drivers**



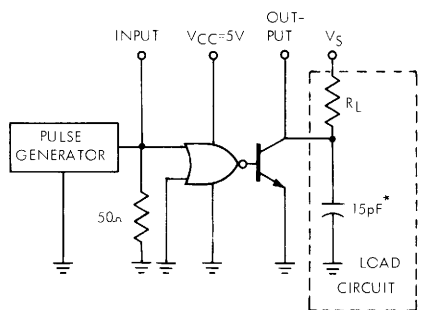
Dwg. No. A-7608

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

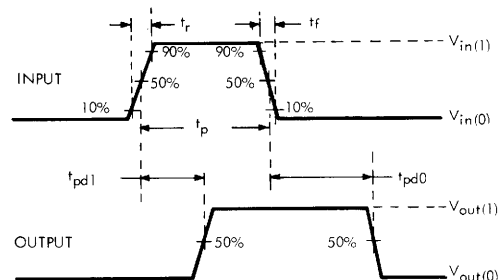
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-402	4.5 V	2.0 V	0 V	40 V	—	—	100	μA
			UHD-402-1	4.5 V	2.0 V	0 V	70 V	—	—	100	μA
			UHD-502	4.5 V	2.0 V	0 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.1	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	0 V	0 V	—	—	18	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Each input is tested separately.



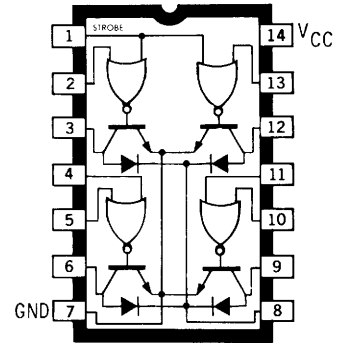
Dwg. No. A-7877C



Dwg. No. A-7628C

*Includes probe and test fixture capacitance.

UHD-403, UHD-403-1, UHD-503 Quad OR Relay Drivers



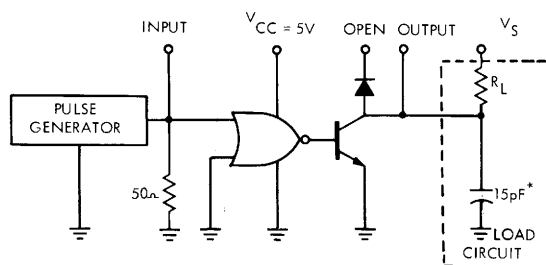
Dwg. No. A-9130B

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

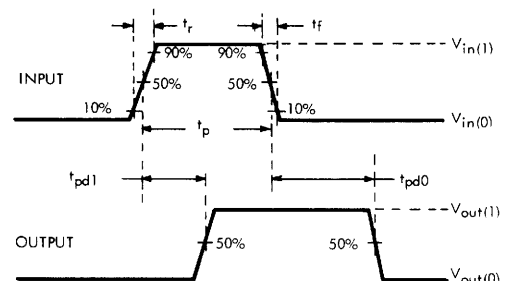
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-403	4.5 V	2.0 V	0 V	40 V	—	—	100	μA
			UHD-403-1	4.5 V	2.0 V	0 V	70 V	—	—	100	μA
			UHD-503	4.5 V	2.0 V	0 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	0.8 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	0.8 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
				5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
				5.5 V	2.4 V	0 V	—	—	—	100	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I _R	—	All	5.0 V	0 V	0 V	Open	—	—	200	μA
Diode Forward Voltage	V _F	—	All	5.0 V	5.0 V	5.0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	6.0	7.5	mA
		I _{CC(0)}	+25°C	All	5.5 V	0 V	0 V	—	—	20	26.5

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V_{OFF}.



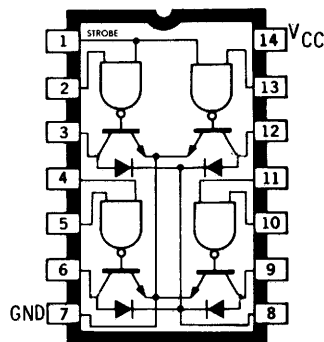
Dwg. No. A-9123C



Dwg. No. A-7628C

*Includes probe and test fixture capacitance.

**UHD-406, UHD-406-1, UHD-506
Quad AND Relay Drivers**



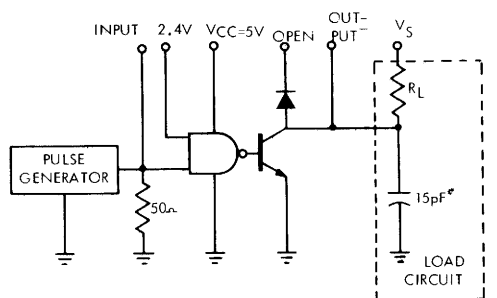
Dwg. No. A-7880B

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

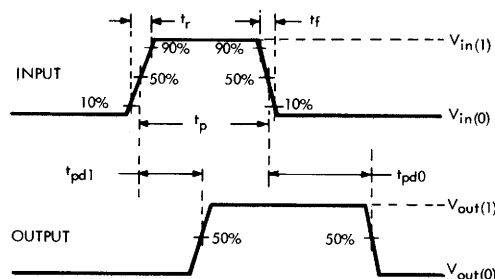
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-406	4.5 V	2.0 V	2.0 V	40 V	—	—	100	μA
			UHD-406-1	4.5 V	2.0 V	2.0 V	70 V	—	—	100	μA
			UHD-506	4.5 V	2.0 V	2.0 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.5	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.7	V
			All	4.5 V	0.8 V	4.5 V	150 mA	—	—	0.6	V
				4.5 V	0.8 V	4.5 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	100	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I _R	—	All	5.0 V	0 V	0 V	Open	—	—	200	μA
Diode Forward Voltage	V _F	—	All	5.0 V	5.0 V	5.0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	4.0	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	0 V	0 V	—	—	17.5	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V_{OFF}.



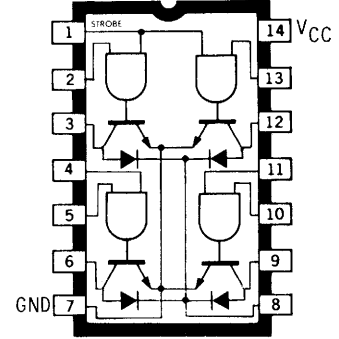
Dwg. No. A-7878C



Dwg. No. A-7628C

*Includes probe and test fixture capacitance.

UHD-407, UHD-407-1, UHD-507 Quad NAND Relay Drivers



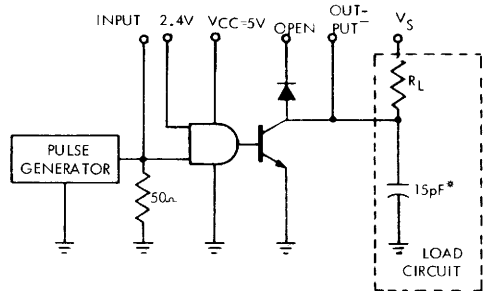
Dwg. No. A-7973B

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

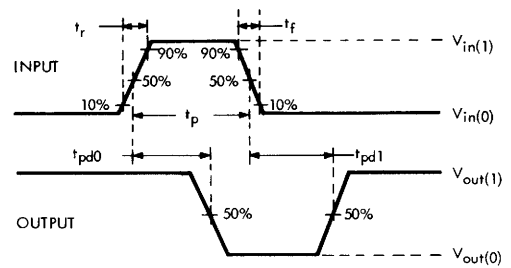
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-407	4.5 V	0.8 V	4.5 V	40 V	—	—	100	μA
			UHD-407-1	4.5 V	0.8 V	4.5 V	70 V	—	—	100	μA
			UHD-507	4.5 V	0.8 V	4.5 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.5	V
			All	4.5 V	2.0 V	2.0 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.6	V
			All	4.5 V	2.0 V	2.0 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
			All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
			All	5.5 V	2.4 V	0 V	—	—	—	100	μA
	I _{IN(1)}	—	All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I _R	—	All	5.0 V	5.0 V	5.0 V	Open	—	—	200	μA
Diode Forward Voltage	V _F	—	All	5.0 V	0 V	0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V_{OFF}.



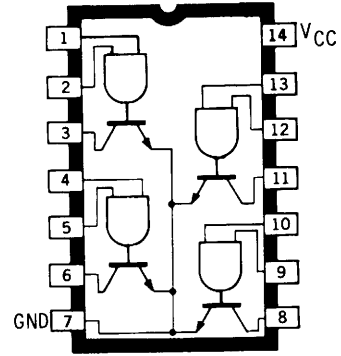
Dwg. No. A-7899C



Dwg. No. A-7900A

*Includes probe and text fixture capacitance.

**UHD-408, UHD-408-1, UHD-508
Quad 2-Input NAND Power Drivers**



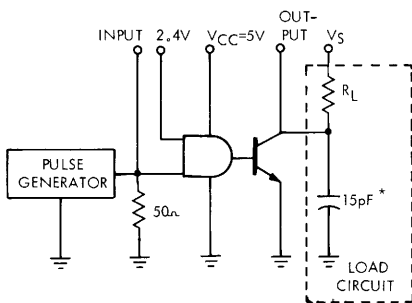
Dwg. No. 12,388

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

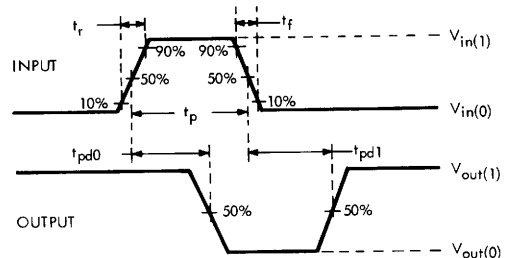
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-408	4.5 V	0.8 V	4.5 V	40 V	—	—	100	μA
			UHD-408-1	4.5 V	0.8 V	4.5 V	70 V	—	—	100	μA
			UHD-508	4.5 V	0.8 V	4.5 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	2.0 V	250 mA	—	—	0.7	V
		+125°C	All	4.5 V	2.0 V	2.0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	2.0 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Each input is tested separately.



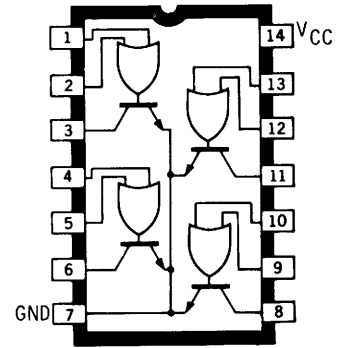
Dwg. No. A-9638A



Dwg. No. A-7900A

*Includes probe and test fixture capacitance.

UHD-432, UHD-432-1, UHD-532 Quad 2-Input NOR Power Drivers



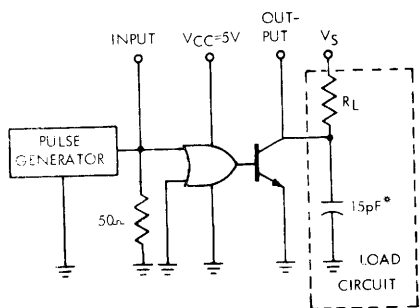
Dwg. No. A-12,389

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

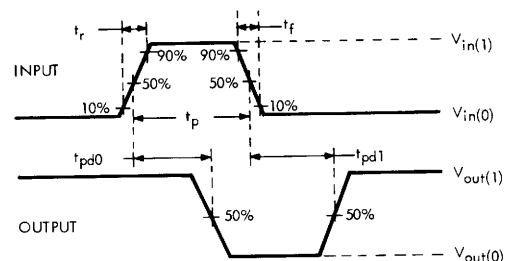
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-432	4.5 V	0.8 V	0.8 V	40 V	—	—	100	μA
			UHD-432-1	4.5 V	0.8 V	0.8 V	70 V	—	—	100	μA
			UHD-532	4.5 V	0.8 V	0.8 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	-55°C to +25°C	All	4.5 V	2.0 V	0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.7	V
			All	4.5 V	2.0 V	0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
	I _{IN(1)}	—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
				5.5 V	5.5 V	0 V	—	—	—	1000	μA
Supply Current (Each Gate)	I _{CC(1)}	+25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
	I _{CC(0)}	+25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

NOTES:

1. All typical values are at V_{CC} = 5.0 V, T_A = +25°C.
2. Each input is tested separately.



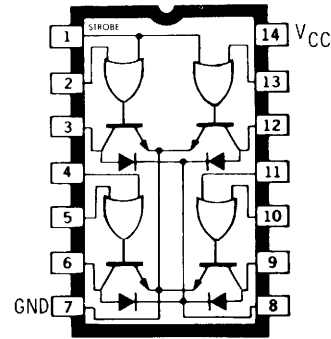
Dwg. No. A-7902C



Dwg. No. A-7900A

*Includes probe and test fixture capacitance.

**UHD-433, UHD-433-1, UHD-533
Quad NOR Relay Drivers**



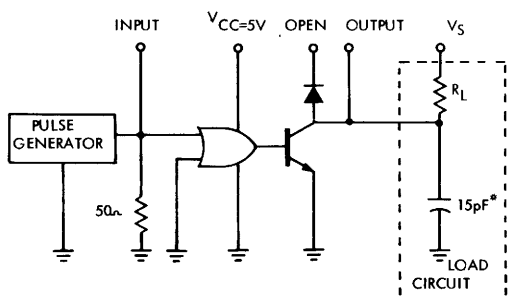
Dwg. No. A-12.390A

ELECTRICAL CHARACTERISTICS over operating temperature range (unless otherwise noted)

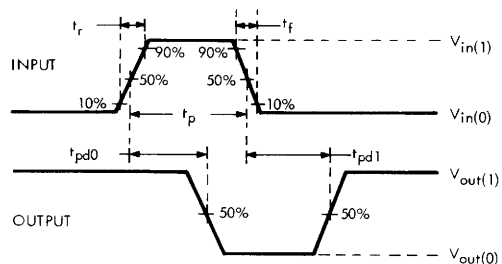
Characteristic	Symbol	Temp.	Applicable Devices	Test Conditions				Limits			
				V _{CC}	Driven Input	Other Input	Output	Min.	Typ.	Max.	Units
Output Reverse Current	I _{CEX}	—	UHD-433	4.5 V	0.8 V	0.8 V	40 V	—	—	100	μA
			UHD-433-1	4.5 V	0.8 V	0.8 V	70 V	—	—	100	μA
			UHD-533	4.5 V	0.8 V	0.8 V	100 V	—	—	100	μA
Output Voltage	V _{CE(SAT)}	- 55°C to + 25°C	All	4.5 V	2.0 V	0 V	150 mA	—	—	0.5	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.7	V
			All	4.5 V	2.0 V	0 V	150 mA	—	—	0.6	V
				4.5 V	2.0 V	0 V	250 mA	—	—	0.8	V
Input Voltage	V _{IN(1)}	—	All	4.5 V	—	—	—	2.0	—	—	V
	V _{IN(0)}	—	All	4.5 V	—	—	—	—	—	0.8	V
Input Current (Note 2)	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-800	μA
		—	All	5.5 V	2.4 V	0 V	—	—	—	40	μA
			All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Strobe Input Current	I _{IN(0)}	—	All	5.5 V	0.4 V	4.5 V	—	—	—	-1.6	mA
		—	All	5.5 V	2.4 V	0 V	—	—	—	100	μA
			All	5.5 V	5.5 V	0 V	—	—	—	1000	μA
Diode Leakage Current (Note 3)	I _R	—	All	5.0 V	5.0 V	5.0 V	Open	—	—	200	μA
Diode Forward Voltage	V _F	—	All	5.0 V	0 V	0 V	200 mA	—	1.5	1.75	V
Supply Current (Each Gate)	I _{CC(1)}	+ 25°C	All	5.5 V	0 V	0 V	—	—	6.0	7.5	mA
		+ 25°C	All	5.5 V	5.0 V	5.0 V	—	—	20	26.5	mA

NOTES:

1. All typical values at are V_{CC} = 5.0 V, T_A = + 25°C.
2. Excluding strobe input; each input is tested separately.
3. All diodes tested simultaneously at pin 8 at rated V_{OFF}.



Dwg. No. A-9135C

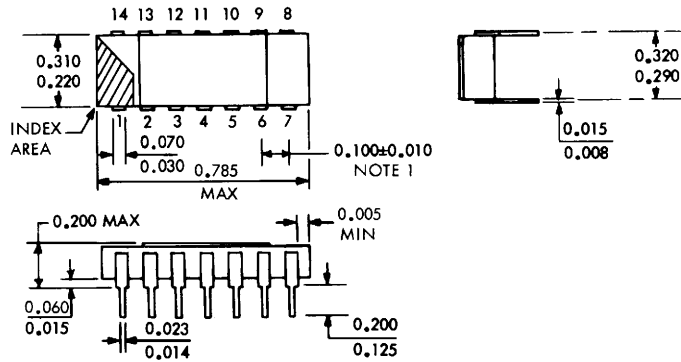


Dwg. No. A-7900A

*Includes probe and test fixture capacitance.

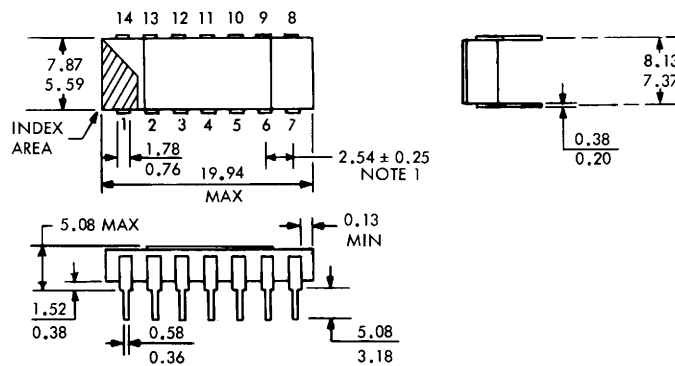
HERMETIC CERAMIC/METAL PACKAGE

DIMENSIONS IN INCHES



DIMENSIONS IN MILLIMETERS

Based on 1" = 25.4 mm



This package conforms to military specification MIL-M-38510, case outline D-1, Configuration 3.

These devices are marked to indicate compliance to the latest issue of MIL-STD-883. For example: UHD400-883 or UHD433-1-883.

NOTES:

1. Lead spacing tolerance is non-cumulative.
2. Exact body and lead configuration at vendor's option within limits shown.
3. Lead gauge plane is 0.030 in. (0.76 mm) max. below seating plane.

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Suite 13 — 9694 Hwy. 20 W
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Tel. 205/883-9948

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Tel. 602/244-0154
Tel. 602/831-6762

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Tucson 85714 — 1640
Tel. 602/746-0955

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Sprague Electric Company

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Van Nuys 91406
Tel. 818/994-6500

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770 Airport Blvd.
Burlingame 94010 — 1927
Tel. 415/347-7701

(San Diego)

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Tel. 303/776-7331

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Tel. 203/264-9595

Sprague Electric Company

120 Hartford Turnpike South
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Wallingford 06492 — 0578
Tel. 203/284-8300

Data Mark Inc.

Unit 7C-2514 Boston Post Road
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Tel. 203/453-0575

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Altamonte Springs 32715 — 1410
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Sprague Electric Company

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Ft. Lauderdale 33309 — 1802
Tel. 305/491-7411

Sprague Electric Company

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6030 — I Unity Drive
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609 Academy Drive
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Cedar Rapids 52402
Tel. 319/393-2232

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New England Technical Sales Corp.
101 Cambridge Street
Burlington 01803
Tel. 617/272-0434

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Ann Arbor 48103 — 3917
Tel. 313/761-2014

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9065 Lyndale Ave. South
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Tel. 914/834-4439

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Sprague Electric Company
P.O. Box 541
Central Islip 11722 — 0541
Tel. 516/234-8700

(Upstate)

Sprague Electric Company
2002 Teall Ave.
Syracuse 13206 — 1542
Tel. 315/437-7311

Paston-Hunter Co., Inc.

2002 Teall Ave.
Syracuse 13206 — 1596
Tel. 315/437-2843

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9741-M Southern Pine Blvd.
Charlotte 28210 — 5560
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Electronic Marketing Associates

9225 Honeycutt Creek Rd.
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Sprague Taiwan Branch/ Tecnomil, Ltd.

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TLX 21422

In the construction of the components described, the full intent of the specification will be met. The Sprague Electric Company, however, reserves the right to make, from time to time, such departures from the detail specifications as may be required to permit improvements in the design of its products. Components made under military approvals will be in accordance with the approval requirements.

The information included herein is believed to be accurate and reliable. However, the Sprague Electric Company assumes no responsibility for its use; nor for any infringements of patents or other rights of third parties which may result from its use.

8203
8455

Subject: Initial Alert for Diminishing Manufacturing Sources and Material Shortages (DMSMS) Case Number 2003-102

* ----- *
* This is an official notification from the DMS PRODUCTION *
* web application running at http://dmssdwl.dsccl.dla.mil. This is *
* intended to be an official notice. *
* ----- *

1. This Center has been advised by GIDEP that ALLEGRO MICROSYSTEMS INC (CAGE 0CVK3), the last known source, had discontinued production of the NSNs listed below. We are in the process of locating residual stock for procurement and/or developing alternate manufacturing sources.

DSCC Managed Items:

NSN	Part Number	WSDC	Estimated 2 yr. Req.
5962-00-264-4802	UHD406		16
5962-00-558-4608	UHD407		24
5962-01-153-2687	UHD408-1		8
5962-00-443-9551	UHD432		24
5962-01-113-4589	UHD502		112
5962-01-206-2289	UHD503		24
5962-00-539-0702	UHD508		280

Non - DSCC Managed Items:

NSN	Part Number	SoS
5962-00-539-0630	226684-002	FLZ
5962-00-539-0630	UHD532	FLZ
5962-00-443-9549	80733-5	JCD
5962-00-443-9549	CM0066-001	JCD
5962-00-443-9549	UHD432	JCD
5962-01-249-8038	UHD-400-1	

2. To prevent the above discontinuance from jeopardizing mission support, request you review your extended support requirements for submission to this Center. The following types of requirements should be considered:

- a. Normal replenishment/replacement requirements.
- b. War Reserve requirements.
- c. Government Furnished Material requirements.
- d. Retrofit and overhaul requirements. (note: users are encouraged to exclude these devices whenever possible from new design or redesign of existing equipment)

3. Request you provide, no later than 25-Jun-2003 the following:

a. The quantity required for extended support of the equipment and the number of years support that quantity represents. In you reply, request inclusion of a statement of necessity for national security which may be required to authorize/justify stockage of materiel beyond normal levels. (Not applicable for International Logistics (IL) customers)

b. Submission not later than 25-Jun-2003, of funded requisitions from International Logistic customers for life-of-type requirements. Requisitions submitted under any type Foreign Military Sales (FMS) case, e.g., defined line, blanket open end, or cooperative logistics supply

support arrangement, are acceptable. Cite advice code 2L or equivalent on the requisition.

c. Funded MIPRs for hardware to be acquired for subsequent use in production of new higher assemblies (i.e., throw away modules/new end items which may be planned/programmed).

4. Justification may be required where your quantity and/or support period projections significantly exceed DSCC estimates. Also, failure to respond with projections by 25-Jun-2003 will result in non-support for you Service/Agency.

5. This Center is continuing its research for alternate sources. However, due to limited time for requirement determination, this DMSMS announcement is being made prior to completing this research.

6. Request you reference this e-mail and DMSMS case number 2003-102 in your reply.

7. Points of contact at this center is Robert Peyton, DSCC-CD,
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