

- NOTES**
- 1 - CENTERLINE OF HALL CELL
 - 2 - THE + MAGNETIC FLUX IS IN THE DIRECTION SHOWN (THIS ASSUMES THE CONVENTION THAT THE DIRECTION OF THE EXTERNAL FLUX OF A MAGNET IS FROM THE NORTH TO THE SOUTH POLE OF THE MAGNET)
 - 3 - THE DEVICE CANNOT BE DAMAGED BY MAGNETIC OVERDRIVE
 - 4 - OUTPUT TYPE - RATIOMETRIC
 - 5 - LEADS MUST BE ADEQUATELY SUPPORTED DURING ANY FORMING/SHEERING OPERATION TO ASSURE THAT THE LEADS ARE NOT STRESSED WITHIN THE PLASTIC
 - 6 - PCB WAVE SOLDERING GUIDELINES ARE AS FOLLOWS:
 250°C PEAK FOR 10 S MAX OR 260°C PEAK FOR 5 S MAX
 BURRS ARE ALLOWED ONLY IF FULL LENGTH OF LEADS WILL PASS THROUGH Ø.023 HOLE.
 LEAD REFERENCE DIMENSIONS DO NOT INCLUDE SOLDER THICKNESS
 - 7 - DIMENSION REFERS TO THE LOCATION OF LEAD CENTERLINES AS THE EXIT THE PLASTIC PACKAGE
 - 8 - SOME COMBINATIONS OF BASIC LISTING AND PACKAGE OPTIONS MAY NOT BE AVAILABLE
 - 9 - ABSOLUTE MAXIMUM RATINGS ARE THE EXTREME LIMITS THE DEVICE WILL MOMENTARILY WITHSTAND WITHOUT DAMAGE TO THE DEVICE. ELECTRICAL AND MAGNETIC CHARACTERISTICS ARE NOT GUARANTEED IF THE RATED VOLTAGE AND/OR CURRENTS ARE EXCEEDED NOR WILL THE DEVICE NECESSARILY OPERATE AT ABSOLUTE MAXIMUM RATINGS
 - 10 - LEAD STRAIGHTNESS MAY BE DEGRADED ON SOME UNITS BY BULK PACKAGING. APPLICATIONS HAVING A CRITICAL LEAD STRAIGHTNESS REQUIREMENT SHOULD USE A TAPE PACKAGING OPTION
 - 11 - AMMOPACK STYLE "T2" & "T3" - 24 SWITCHES BETWEEN FOLDS, SKP 1 SPACE AT FOLD. MAY BE REFERRED TO AS "FAN FOLD"
 - 12 - MOLDED PART DIMENSIONS DO NOT INCLUDE FLASH. FLASH IS LIMITED TO .005 MAXIMUM
 - 13 - TAPE AND AMMOPACK PER EIA-488
 - 14 - POKET TAPE PER EIA-481

CATALOG LISTING	TAPE STYLE	DIM "L" ± .015	DIM "W" ± .004	COMMENTS
SS496A	NONE	.590	.050	BULK-1000/BAG
SS496A-T2	T2	.590	.050	5000/BOX
SS496A-T3	T3	.590	.050	5000/BOX
SS496A-S	NONE	.725	.050	BULK-1000/BAG
SS496A-SP	P	.590	.050	1000/PACKET TAPE AND REEL
SS496AT	NONE	.590	.050	BULK-1000/BAG
SS496AT-T2	T2	.590	.050	5000/BOX
SS496AT-T3	T3	.590	.050	5000/BOX
SS496AT-S	NONE	.725	.050	BULK-1000/BAG
SS496AT-SP	P	.590	.050	1000/PACKET TAPE AND REEL
SS496B	NONE	.590	.050	BULK-1000/BAG
SS496B-T2	T2	.590	.050	5000/BOX
SS496B-T3	T3	.590	.050	5000/BOX
SS496B-S	NONE	.725	.050	BULK-1000/BAG
SS496B-SP	P	.590	.050	1000/PACKET TAPE AND REEL

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ESD SENSITIVITY: CLASS 3

MASTER REDUCED FROM ORIGINAL

ANSI Y14.5M-1982 APPLIES

MICRO SWITCH
 Honeywell Division

MINIATURE RATIOMETRIC
 LINEAR HALL EFFECT SENSOR

SS496 SERIES CHART 1

THIRD ANGLE PROJECTION

SCALE: 1" = 1"

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED

ONE PLACE: 0.030

TWO PLACES: 0.015

THREE PLACES: 0.005

ANGLES: ± 2°

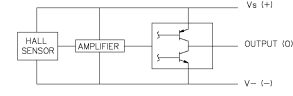
NE 1/8"

CHARACTERISTICS ARE AT $V_s=5.00$ WITH 4.7K OUTPUT TO MINUS WITH $T_A=-40^{\circ}\text{C}$ TO $+125^{\circ}\text{C}$ UNLESS OTHERWISE SPECIFIED

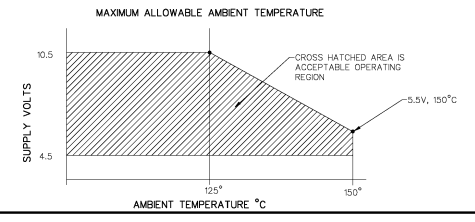
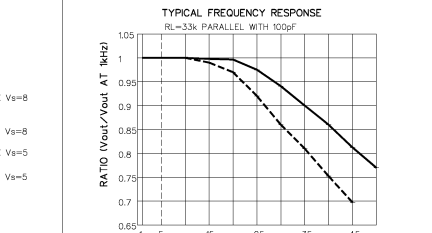
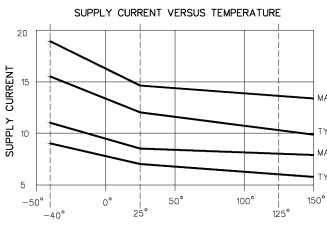
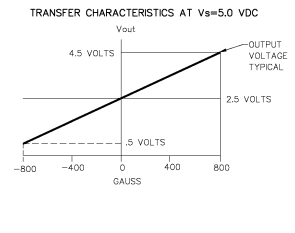
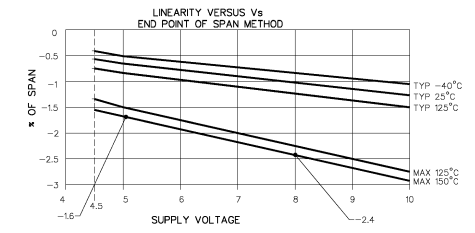
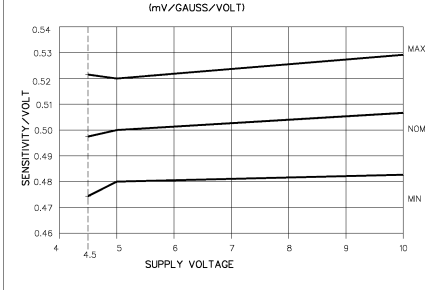
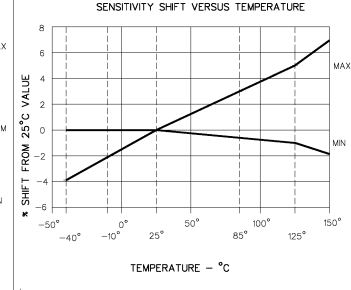
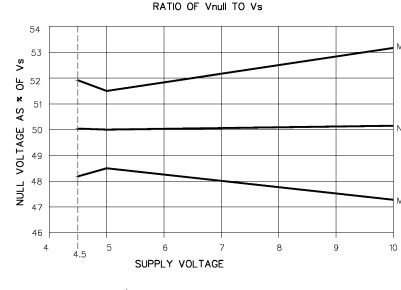
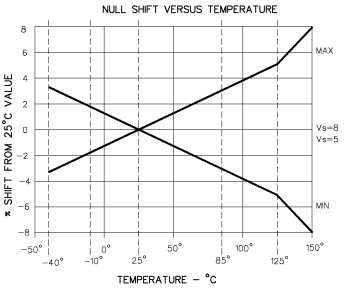
SS496A

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
SENSITIVITY	$T_A = 25^{\circ}\text{C}$	2.4	2.5	2.6	mV/GAUSS
NULL	$T_A = 25^{\circ}\text{C}$	2.425	2.50	2.575	VOLTS
SUPPLY CURRENT	$T_A = 25^{\circ}\text{C}$		7	8.7	mA
OUTPUT CURRENT SOURCE	$V_s > 4.5$	1mA	1.5mA		
SINK	$V_s > 4.5$.6mA	1.5mA		
SINK	$V_s > 5.0$	1mA	1.5mA		
RESPONSE TIME			3.45		
OUTPUT VOLTAGE SWING					
V _{OM} -	-B APPLIED	.4	.2		VOLTS
V _{OM} +	+B APPLIED	$V_s - .4$	$V_s - .2$		VOLTS
B LIMITS FOR LINEAR OPERATION					
-B MAX		-75.0	-84.0		GAUSS
+B MAX		+75.0	+84.0		GAUSS
V _{NULL} DRIFT	$B = 0, T_A = 25^{\circ}\text{C}$ TO $+125^{\circ}\text{C}$	- .048		+ .048	$\% / ^{\circ}\text{C}$
V _{NULL} DRIFT	$B = 0, T_A = +125^{\circ}\text{C}$ TO $+150^{\circ}\text{C}$	- .064		+ .064	$\% / ^{\circ}\text{C}$
SENSITIVITY DRIFT	$T_A = +25^{\circ}\text{C}$ TO $+125^{\circ}\text{C}$	- .01		+ .05	$\% / ^{\circ}\text{C}$
SENSITIVITY DRIFT	$T_A = -40^{\circ}\text{C}$ TO $+25^{\circ}\text{C}$	0		+ .08	$\% / ^{\circ}\text{C}$
LINEARITY	$B = -80.0$ TO $+60.0$	0	-1.0	-1.5	$\%$ OF SPAN
SUPPLY VOLTAGE	-40°C TO $+125^{\circ}\text{C}$	4.5	5.0	10.5	VOLTS
OPERATING TEMP	SEE MAX TEMPERATURE CHART	-40		+150	$^{\circ}\text{C}$

BLOCK DIAGRAM CURRENT SINKING OR SOURCING OUTPUT



CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
SUPPLY VOLTAGE	V_{cc}		-0.5	11	V
OUTPUT VOLTAGE	V_{out}		-0.5	11	V
OUTPUT CURRENT	I_{out}	SOURCE OR SINK	10		mA
TEMPERATURE	T_A	OPERATING	-55	150	$^{\circ}\text{C}$
	T_s	STORAGE ($V_{cc}=0$)	-55	165	$^{\circ}\text{C}$



THIRD ANGLE PROJECTION

SCALE: NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED

ONE PLACE 100 0.030

TWO PLACES 1000 0.010

THREE PLACES 10000 0.005

ANGLES $\pm 2^{\circ}$

WEIGHT

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780-444-1100

ANSI Y14.5M-1982 APPLIES

MASTER REDUCED Honeywell Division

MICRO SWITCH

MINIATURE RATIOMETRIC LINEAR HALL EFFECT SENSOR

SS496 SERIES CHART 1

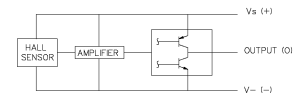
CHARACTERISTICS ARE AT $V_s=5.0$ V WITH 4.7K OUTPUT TO MINUS WITH $T_A=-40^{\circ}\text{C}$ TO $+125^{\circ}\text{C}$ UNLESS OTHERWISE SPECIFIED

SS496A1

SS496 SERIES CHART 1

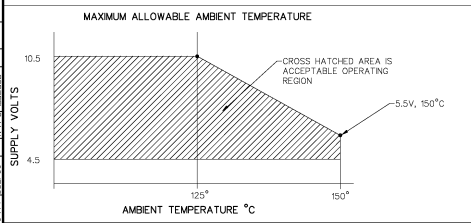
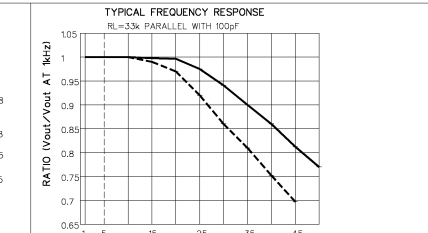
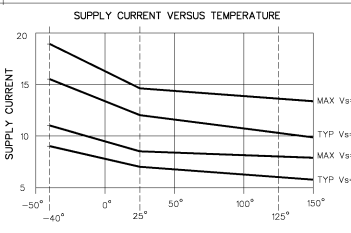
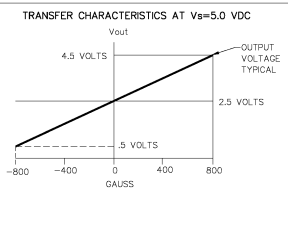
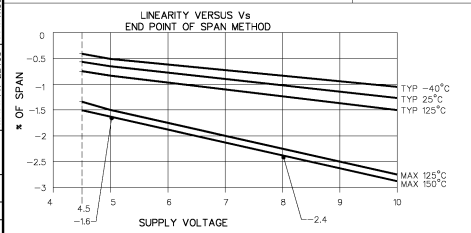
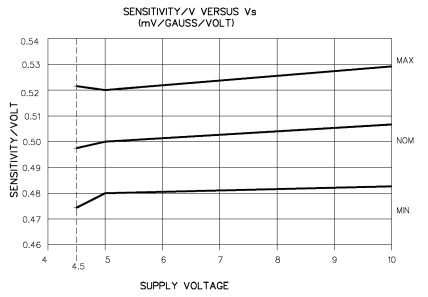
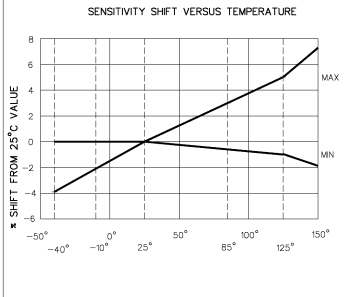
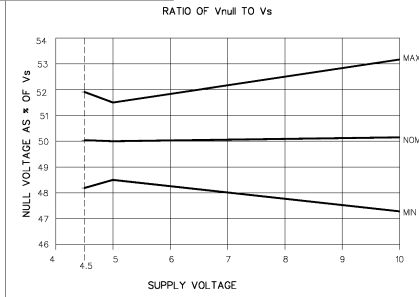
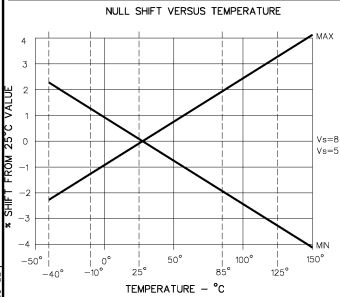
PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
SENSITIVITY	$T_A = 25^{\circ}\text{C}$	2.425	2.500	2.575	mV/GAUSS
NULL	$T_A = 25^{\circ}\text{C}$	2.425	2.50	2.575	VOLTS
SUPPLY CURRENT	$T_A = 25^{\circ}\text{C}$		7	8.7	mA
OUTPUT CURRENT SOURCE	$V_s > 4.5$	1mA	1.5mA		
SINK	$V_s > 4.5$	1.5mA	1.5mA		
SINK	$V_s > 5.0$	1mA	1.5mA		
RESPONSE TIME			3 μs		
OUTPUT VOLTAGE SWING					
VOM -	-B APPLIED	-4	-2		VOLTS
VOM +	+B APPLIED	$V_s - .4$	$V_s - .2$		VOLTS
B LIMITS FOR LINEAR OPERATION					
-B MAX		-7.50	-8.40		GAUSS
+B MAX		+7.50	+8.40		GAUSS
V_{null} DRIFT	$B = 0, T_A = 25^{\circ}\text{C TO } 125^{\circ}\text{C}$	-0.32		+0.32	$\% / ^{\circ}\text{C}$
V_{null} DRIFT	$B = 0, T_A = +125^{\circ}\text{C TO } +150^{\circ}\text{C}$	-0.64		+0.64	$\% / ^{\circ}\text{C}$
SENSITIVITY DRIFT	$T_A = +25^{\circ}\text{C TO } +150^{\circ}\text{C}$	-0.1		+0.5	$\% / ^{\circ}\text{C}$
SENSITIVITY DRIFT	$T_A = -40^{\circ}\text{C TO } +25^{\circ}\text{C}$	0		+0.6	$\% / ^{\circ}\text{C}$
LINEARITY	$B = -600 \text{ TO } +600$	0	-1.0	-1.5	$\% \text{ OF SPAN}$
SUPPLY VOLTAGE	$-40^{\circ}\text{C TO } +125^{\circ}\text{C}$	4.5	5.0	10.5	VOLTS
OPERATING TEMP	SEE MAX TEMPERATURE CHART	-40		+150	$^{\circ}\text{C}$

BLOCK DIAGRAM CURRENT SINKING OR SOURCING OUTPUT



ABSOLUTE MAXIMUM CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
SUPPLY VOLTAGE	V_{cc}		-0.5	11	V
OUTPUT VOLTAGE	V_{out}		-0.5	11	V
OUTPUT CURRENT	I_{out}	SOURCE OR SINK	50	50	mA
TEMPERATURE	T_A	OPERATING	-55	150	$^{\circ}\text{C}$
	T_s	STORAGE ($V_{cc}=0$)	-55	165	$^{\circ}\text{C}$



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ESD SENSITIVITY: CLASS 3

MASTER REDUCED Honeywell Division

ANSI Y14.5M-1982 APPLIES

THIRD ANGLE PROJECTION

SCALE: NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED

TOLERANCES SPECIFIED

ONE PLACE .030

TWO PLACES .005

THREE PLACES .0005

ANGLES .2°

NE.100T

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DATE: 04/19/82

REVISION: 1

DESCRIPTION: MINIATURE RATIO-METRIC LINEAR HALL EFFECT SENSOR

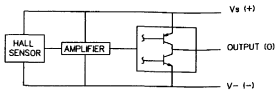
SS496 SERIES CHART 1

CHARACTERISTICS ARE AT $V_{S}=5.0$ WITH 4.7K OUTPUT TO MINUS WITH $T_A = -40^{\circ}\text{C}$ TO $+125^{\circ}\text{C}$ UNLESS OTHERWISE SPECIFIED

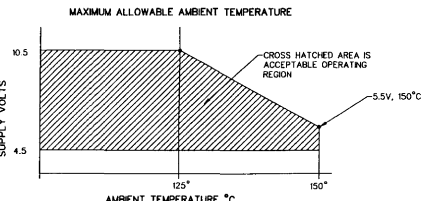
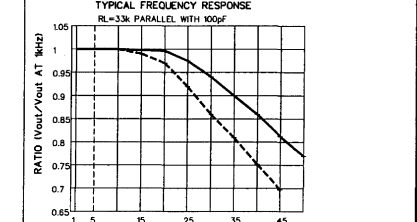
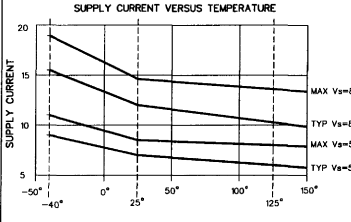
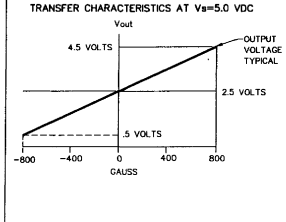
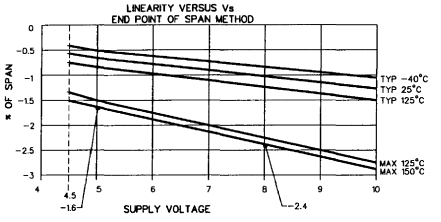
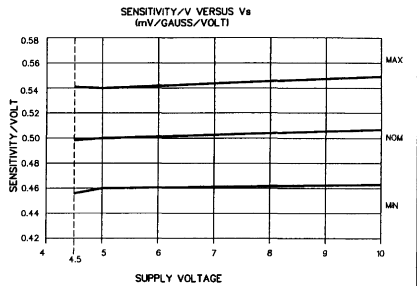
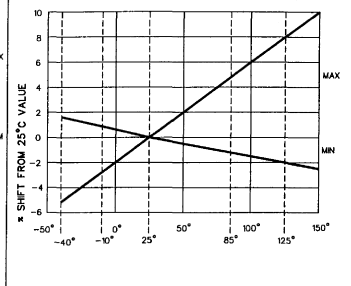
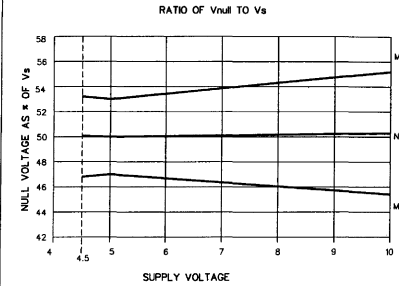
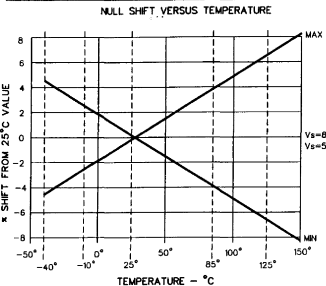
SS496B

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
SENSITIVITY	$T_A = 25^{\circ}\text{C}$	2.300	2.500	2.700	mV/GAUSS
NULL	$T_A = 25^{\circ}\text{C}$	2.350	2.50	2.550	VOLTS
SUPPLY CURRENT	$T_A = 25^{\circ}\text{C}$	7	7	8.7	mA
OUTPUT CURRENT SOURCE	$V_S > 4.5$	1mA	1.5mA		
SINK	$V_S > 4.5$	5mA	1.0mA		
SINK	$V_S > 5.0$	1mA	1.5mA		
RESPONSE TIME		3μS			
OUTPUT VOLTAGE SWING					
VOM -	-B APPLIED	.4	.2		VOLTS
VOM +	+B APPLIED	$V_S - .4$	$V_S - .2$		VOLTS
B LIMITS FOR LINEAR OPERATION	-B MAX	-750	-840		GAUSS
	+B MAX	+750	+840		GAUSS
V_{null} DRIFT	$B = 0, T_A = 25^{\circ}\text{C}$ TO 125°C	-0.64	+0.64		mV/°C
V_{null} DRIFT	$B = 0, T_A = +125^{\circ}\text{C}$ TO $+150^{\circ}\text{C}$	-0.64	+0.64		mV/°C
SENSITIVITY DRIFT	$T_A = +25^{\circ}\text{C}$ TO $+150^{\circ}\text{C}$	-0.2	+0.8		%/°C
SENSITIVITY DRIFT	$T_A = -40^{\circ}\text{C}$ TO $+25^{\circ}\text{C}$	-0.2	+0.8		%/°C
LINEARITY	$B = -800$ TO $+600$	0	-1.0	-1.5	% OF SPAN
SUPPLY VOLTAGE	-40°C TO $+125^{\circ}\text{C}$	4.5	5.0	10.5	VOLTS
OPERATING TEMP	SEE MAX TEMPERATURE CHART	-40	+150		°C

BLOCK DIAGRAM CURRENT SINKING OR SOURCING OUTPUT



CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
SUPPLY VOLTAGE	V_{CC}		-0.5	11	V
OUTPUT VOLTAGE	V_{out}		-0.5	11	V
OUTPUT CURRENT	I_{out}	SOURCE OR SINK	10	10	mA
TEMPERATURE	T_A	OPERATING	-55	150	°C
	T_S	STORAGE ($V_{CC}=0$)	-55	165	°C



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SCALE	ONE PLACE	TWO PLACES	THREE PLACES	ANGLES
1:1	0.030	0.015	0.005	1/2°

SS496 SERIES CHART 1
PAGE 1 OF 2
REV. 2-2003