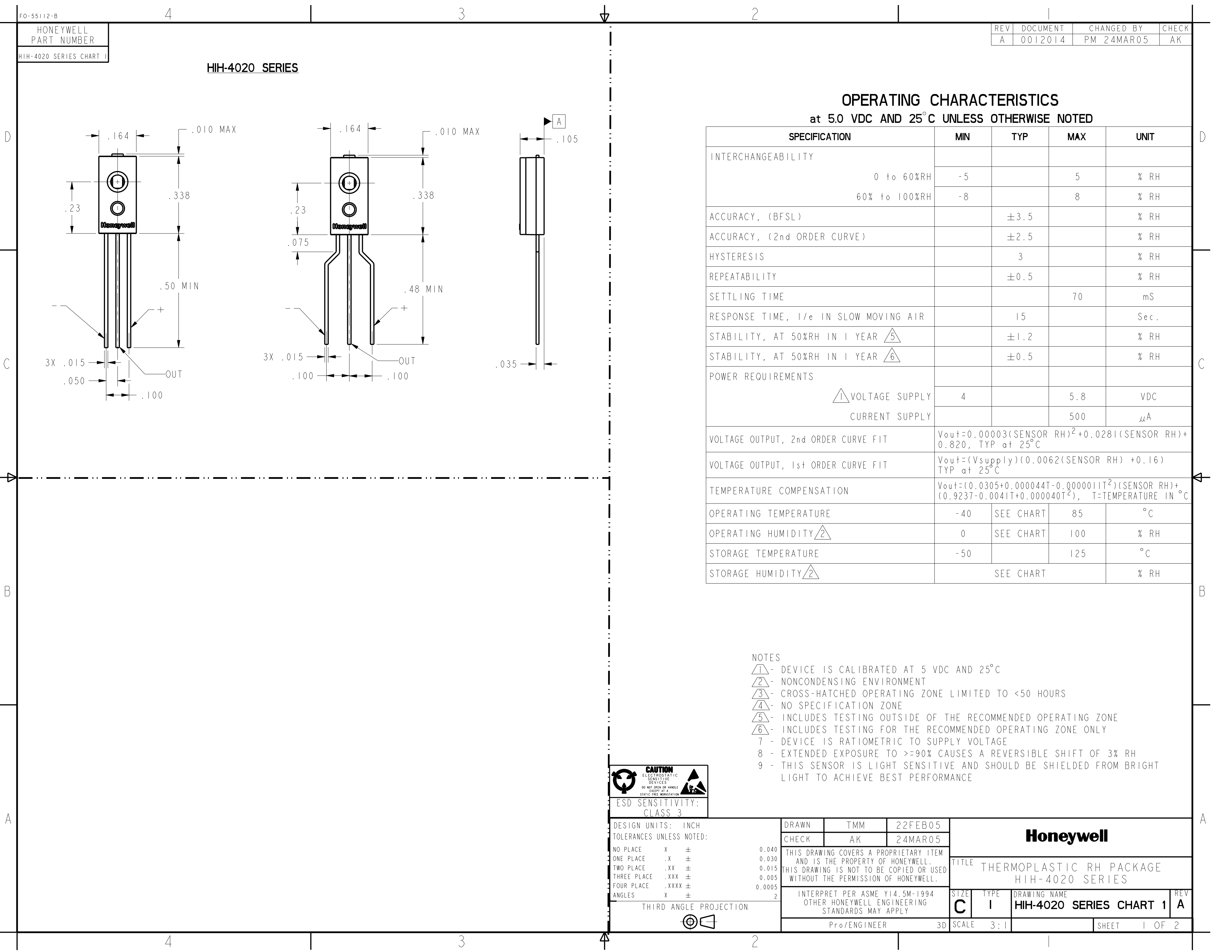




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C

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REV	DOCUMENT	CHANGED BY	CHECK
A	0012014	PM 24MAR05	AK

OPERATING CHARACTERISTICS
at 5.0 VDC AND 25°C UNLESS OTHERWISE NOTED

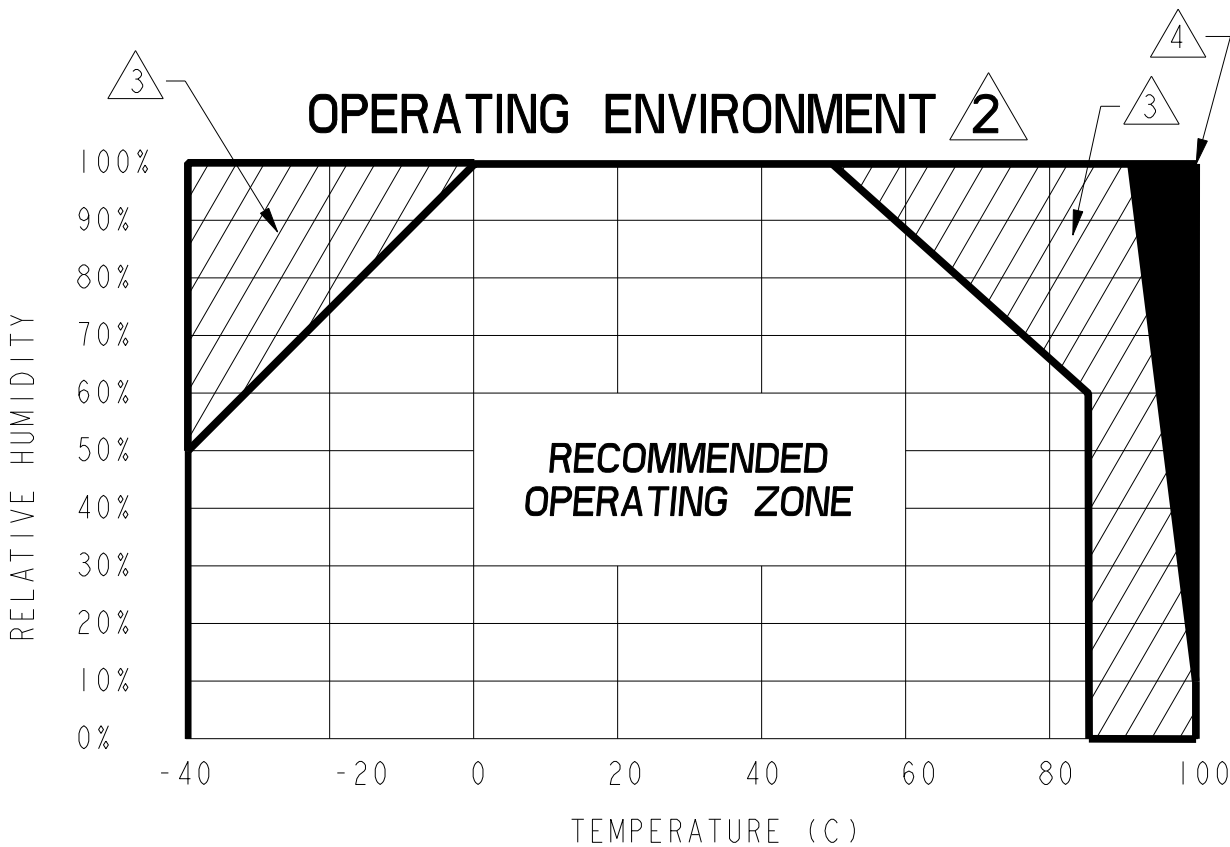
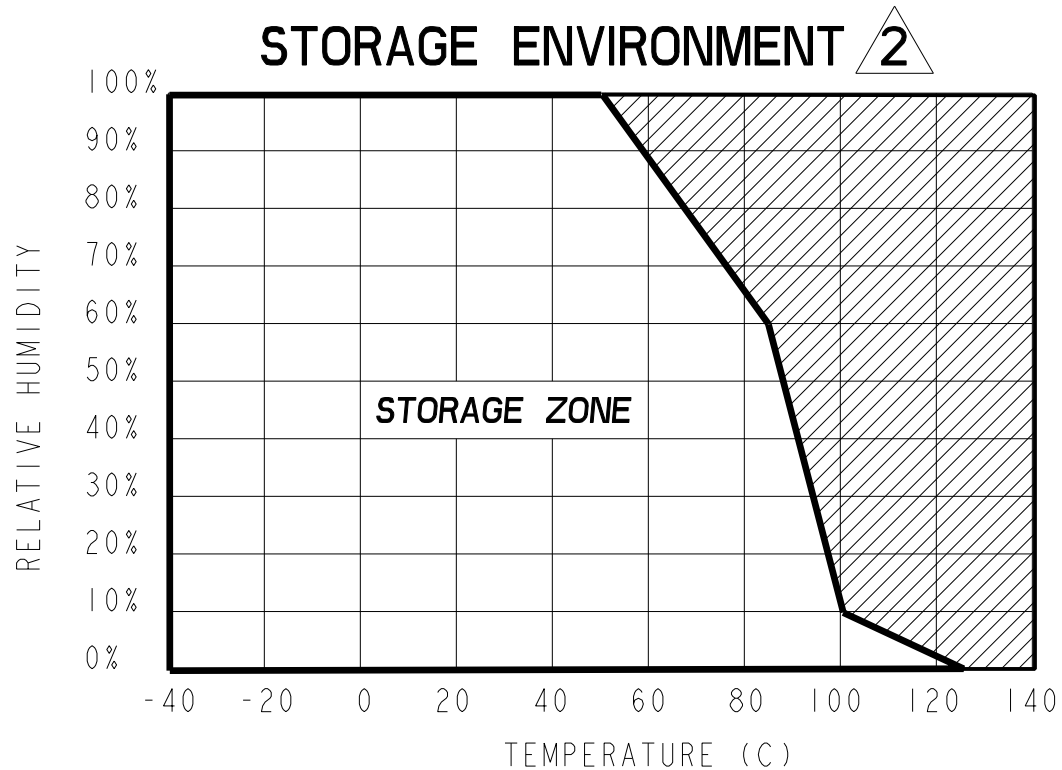
SPECIFICATION	MIN	TYP	MAX	UNIT
INTERCHANGEABILITY 0 to 60%RH 60% to 100%RH				
	-5		5	% RH
	-8		8	% RH
ACCURACY, (BFSL)		±3.5		% RH
ACCURACY, (2nd ORDER CURVE)		±2.5		% RH
HYSTERESIS		3		% RH
REPEATABILITY		±0.5		% RH
SETTLING TIME			70	mS
RESPONSE TIME, 1/e IN SLOW MOVING AIR		15		Sec.
STABILITY, AT 50%RH IN 1 YEAR $\triangle 5$		±1.2		% RH
STABILITY, AT 50%RH IN 1 YEAR $\triangle 6$		±0.5		% RH
POWER REQUIREMENTS $\triangle 1$ VOLTAGE SUPPLY CURRENT SUPPLY	4		5.8	VDC
			500	μA
VOLTAGE OUTPUT, 2nd ORDER CURVE FIT	$V_{out}=0.00003(SENSE\ RH)^2+0.0281(SENSE\ RH)+0.820$, TYP at 25°C			
VOLTAGE OUTPUT, 1st ORDER CURVE FIT	$V_{out}=(V_{supply})(0.0062(SENSE\ RH) +0.16)$ TYP at 25°C			
TEMPERATURE COMPENSATION	$V_{out}=(0.0305+0.000044T-0.000001T^2)(SENSE\ RH)+(0.9237-0.0041T+0.000040T^2)$, T=TEMPERATURE IN °C			
OPERATING TEMPERATURE	-40	SEE CHART	85	°C
OPERATING HUMIDITY $\triangle 2$	0	SEE CHART	100	% RH
STORAGE TEMPERATURE	-50		125	°C
STORAGE HUMIDITY $\triangle 2$	SEE CHART			% RH

- NOTES
- $\triangle 1$ - DEVICE IS CALIBRATED AT 5 VDC AND 25°C
 - $\triangle 2$ - NONCONDENSING ENVIRONMENT
 - $\triangle 3$ - CROSS-HATCHED OPERATING ZONE LIMITED TO <50 HOURS
 - $\triangle 4$ - NO SPECIFICATION ZONE
 - $\triangle 5$ - INCLUDES TESTING OUTSIDE OF THE RECOMMENDED OPERATING ZONE
 - $\triangle 6$ - INCLUDES TESTING FOR THE RECOMMENDED OPERATING ZONE ONLY
 - 7 - DEVICE IS RATIO-METRIC TO SUPPLY VOLTAGE
 - 8 - EXTENDED EXPOSURE TO >=90% CAUSES A REVERSIBLE SHIFT OF 3% RH
 - 9 - THIS SENSOR IS LIGHT SENSITIVE AND SHOULD BE SHIELDED FROM BRIGHT LIGHT TO ACHIEVE BEST PERFORMANCE



ESD SENSITIVITY:
CLASS 3

DESIGN UNITS: INCH TOLERANCES UNLESS NOTED:		DRAWN	TMM	22FEB05	Honeywell			
NO PLACE X ± 0.040 ONE PLACE .X ± 0.030 TWO PLACE .XX ± 0.015 THREE PLACE .XXX ± 0.005 FOUR PLACE .XXXX ± 0.0005 ANGLES X ± 2		CHECK	AK	24MAR05				
THIRD ANGLE PROJECTION		THIS DRAWING COVERS A PROPRIETARY ITEM AND IS THE PROPERTY OF HONEYWELL. THIS DRAWING IS NOT TO BE COPIED OR USED WITHOUT THE PERMISSION OF HONEYWELL.			TITLE THERMOPLASTIC RH PACKAGE HIH-4020 SERIES			
		INTERPRET PER ASME Y14.5M-1994 OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY			SIZE	TYPE	DRAWING NAME	REV
		Pro/ENGINEER			C	I	HIH-4020 SERIES CHART 1	A
					SCALE	3:1	SHEET	1 OF 2



PRODUCT DESCRIPTION	
CATALOG LISTING	DESCRIPTION
HIH-4020-001	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP
HIH-4020-002	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP
HIH-4020-003	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT
HIH-4020-004	COVERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT
HIH-4021-001	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP
HIH-4021-002	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP
HIH-4021-003	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.100 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT
HIH-4021-004	COVERED, FILTERED INTEGRATED CIRCUIT HUMIDITY SENSOR, 0.050 IN LEAD PITCH SIP WITH CALIBRATION AND DATA PRINTOUT

DATA PRINTOUT (EXAMPLE)	
MODEL	HIH-4020-001
CHANNEL	92
WAFER	030996M
MRP	337313
CALCULATED VALUES AT 5 V	
Vout @ 0% RH	0.958 V
Vout @ 75.3% RH	3.268 V
LINEAR OUTPUT FOR 2% RH	
ACCURACY @ 25 °C	
ZERO OFFSET	0.958 V
SLOPE	30.680 mV/%RH
RH	(Vout-ZERO OFFSET)/SLOPE
	(Vout-0.958)/0.0307
RATIOMETRIC RESPONSE FOR 0 TO 100% RH	
Vout	Vsupply (0.1915 TO 0.8130)

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Honeywell

SIZE	DWG TYPE	DRAWING NAME	REV
C	I	HIH-4020 SERIES CHART 1	A
SCALE	3:1	SHEET	2 OF 2