

HONEYWELL PART NUMBER
SS30F6T

CATALOG LISTING	PACKAGE	REEL QTY
SS30F6T	7" 8mm REEL	3000

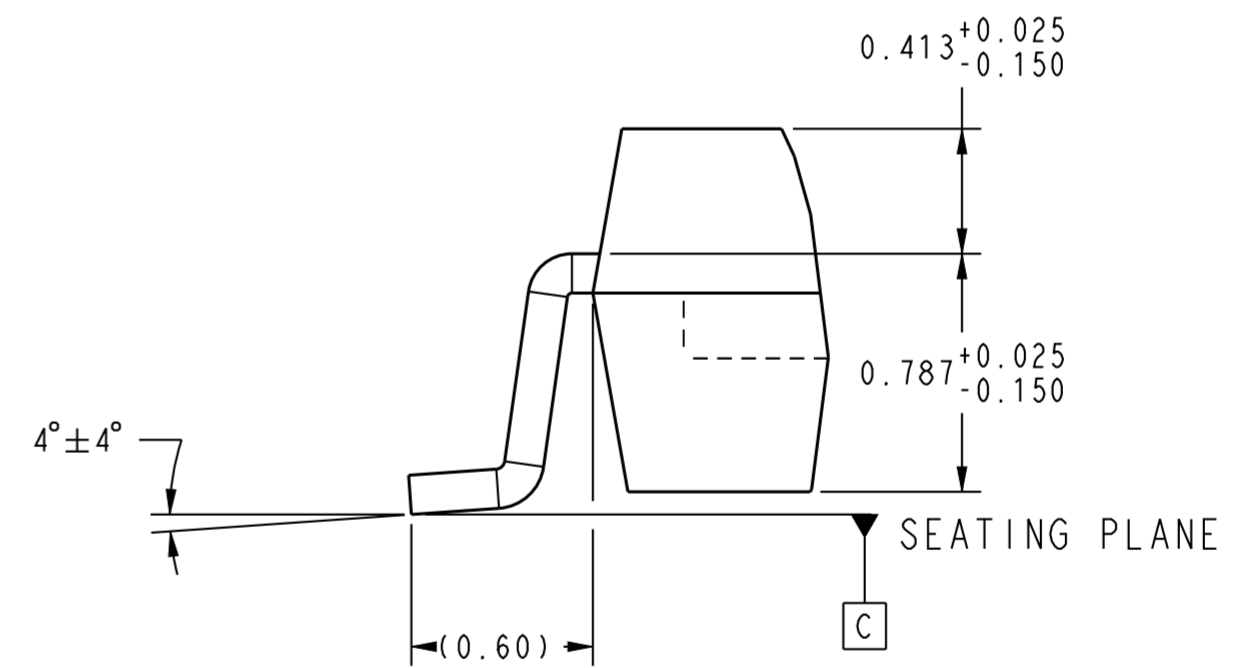
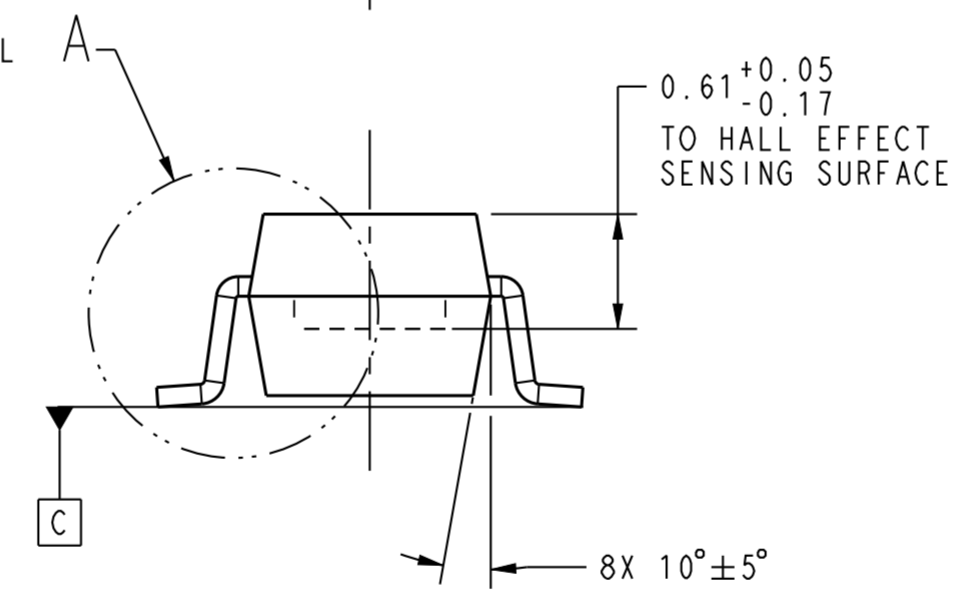
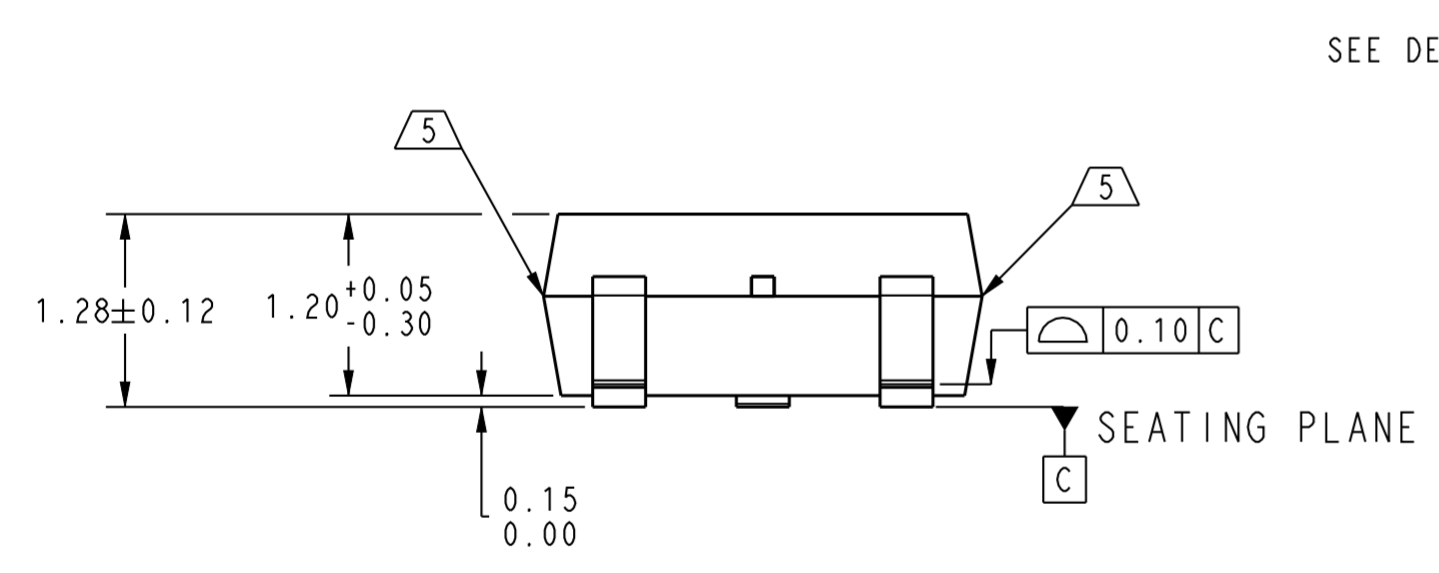
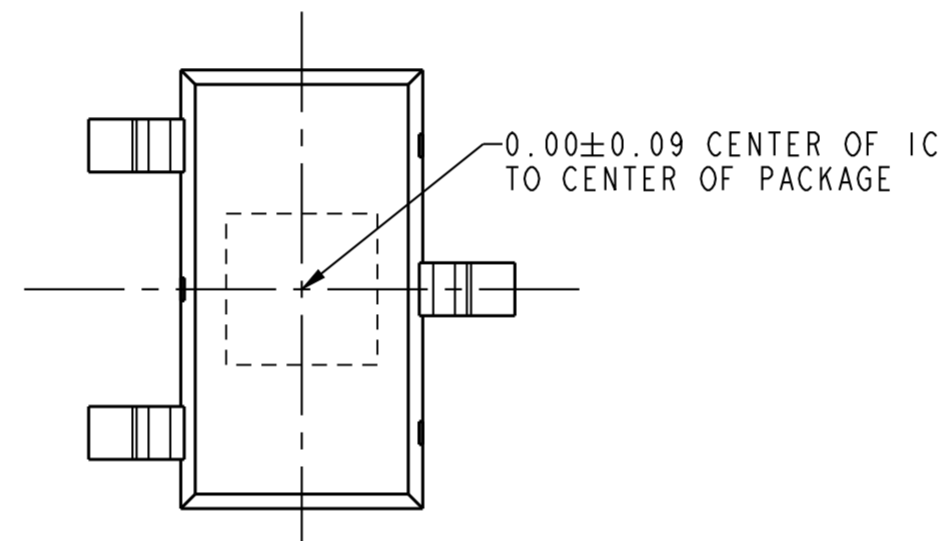
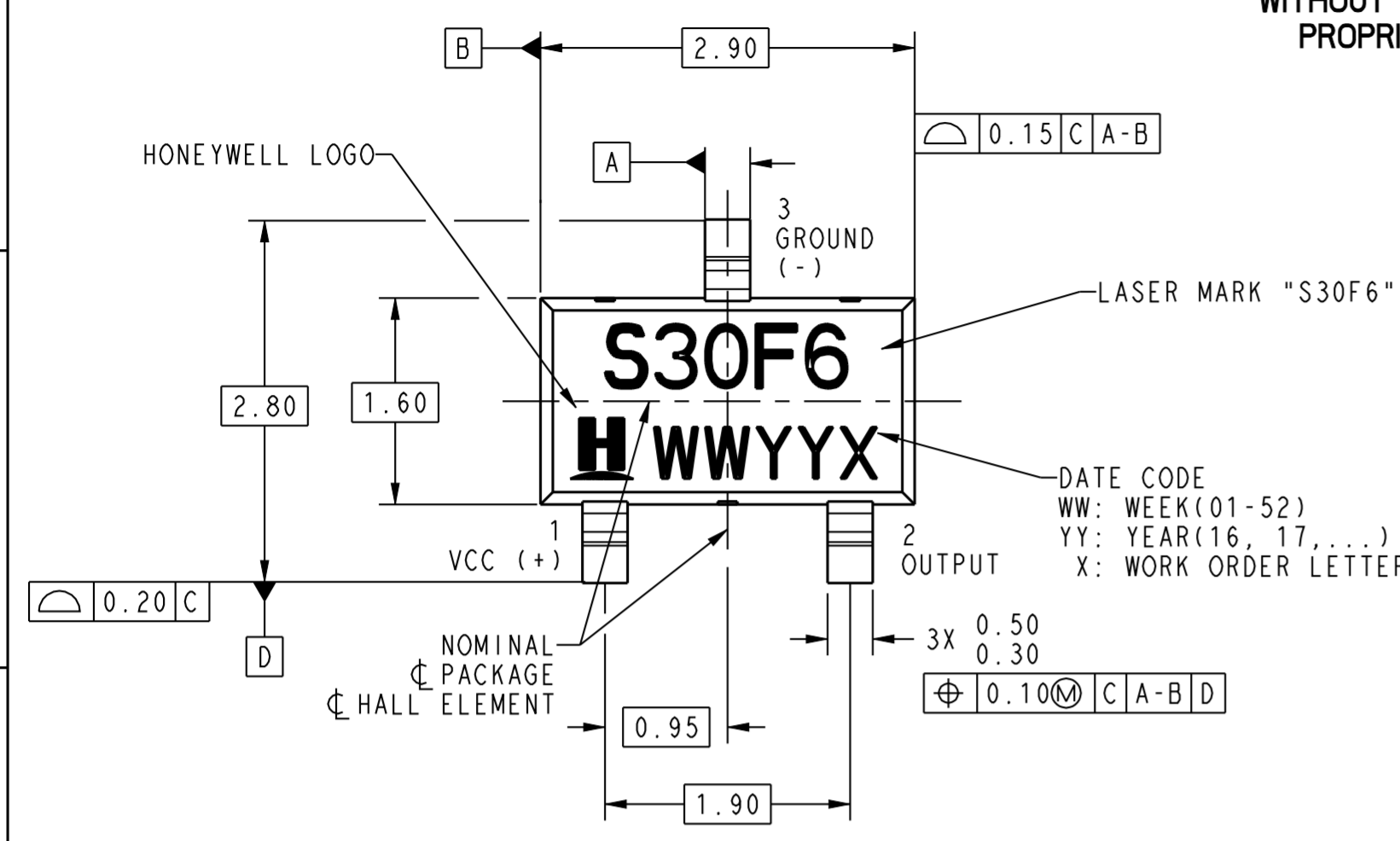
REV	DOCUMENT	CHANGED BY	CHECK
1	-	RGA 03JUL20	-

PRELIMINARY INFORMATION ONLY

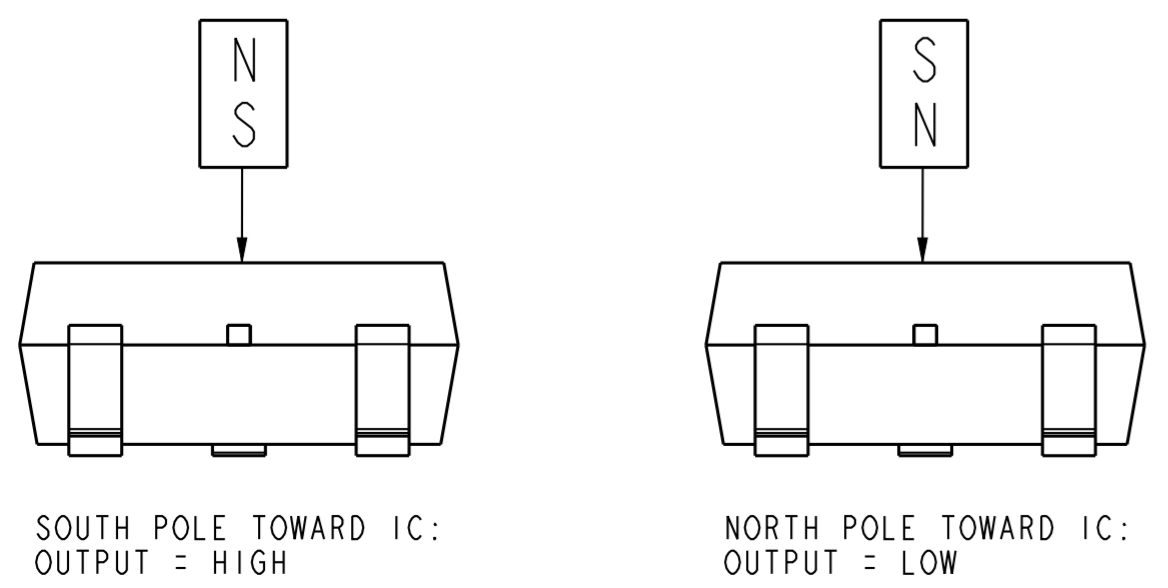
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NOTES

- 1 - SOLDERING INSTRUCTIONS: EXPOSURE TO HIGH TEMPERATURES SHOULD BE KEPT AT A MINIMUM HONEYWELL RECOMMENDS AN INFRARED REFLOW PROCESS WITH PEAK TEMPERATURES NOT EXCEEDING 245°C FOR 10 SECONDS MAXIMUM. DO NOT WAVE SOLDER THIS PRODUCT, AS THIS PROCESS MAY NEGATIVELY AFFECT THE SENSOR'S PERFORMANCE AND RELIABILITY. SUBJECTING THESE PRODUCTS TO WAVE SOLDERING WILL VOID HONEYWELL'S WARRANTY
- 2 - 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 SPECIFIED VOLTAGE AND/OR CURRENTS ARE EXCEEDED NOR WILL THE DEVICE NECESSARILY OPERATE AT ABSOLUTE MAXIMUM RATING
- 3 - THE MAGNETIC FIELD STRENGTH (GAUSS) REQUIRED TO CAUSE THE SWITCH TO CHANGE STATE (OPERATE AND RELEASE) WILL BE AS SPECIFIED IN THE MAGNETIC CHARACTERISTICS. TO TEST THE SWITCH AGAINST THE SPECIFIED MAGNETIC CHARACTERISTICS, THE SWITCH MUST BE PLACED IN A UNIFORM MAGNETIC FIELD
- 4 - THIS PRODUCT WILL BE SUPPLIED IN TAPE AND REEL FORM PER EIA STD 481.
- 5 - GATE VESTAGE PERMITTED IN THESE AREAS. UNDERFLUSH BREAKOUT LIMITED TO .007
- 6 - THESE HALL EFFECT SENSORS MAY HAVE AN INITIAL OUTPUT IN EITHER THE ON OR OFF STATE IF POWERED UP WITH AN APPLIED MAGNETIC FIELD IN THE DIFFERENTIAL ZONE (APPLIED MAGNETIC FIELD > Brp AND < Bop). HONEYWELL RECOMMENDS THAT THE APPLICATION CIRCUIT DESIGNER ALLOW 10 MICROSECONDS AFTER SUPPLY VOLTAGE HAS REACHED 5 VOLTS FOR THE OUTPUT VOLTAGE TO STABILIZE

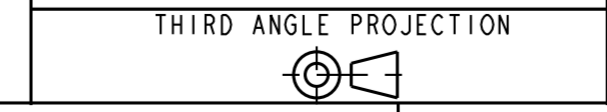


DETAIL A
SCALE 40:1



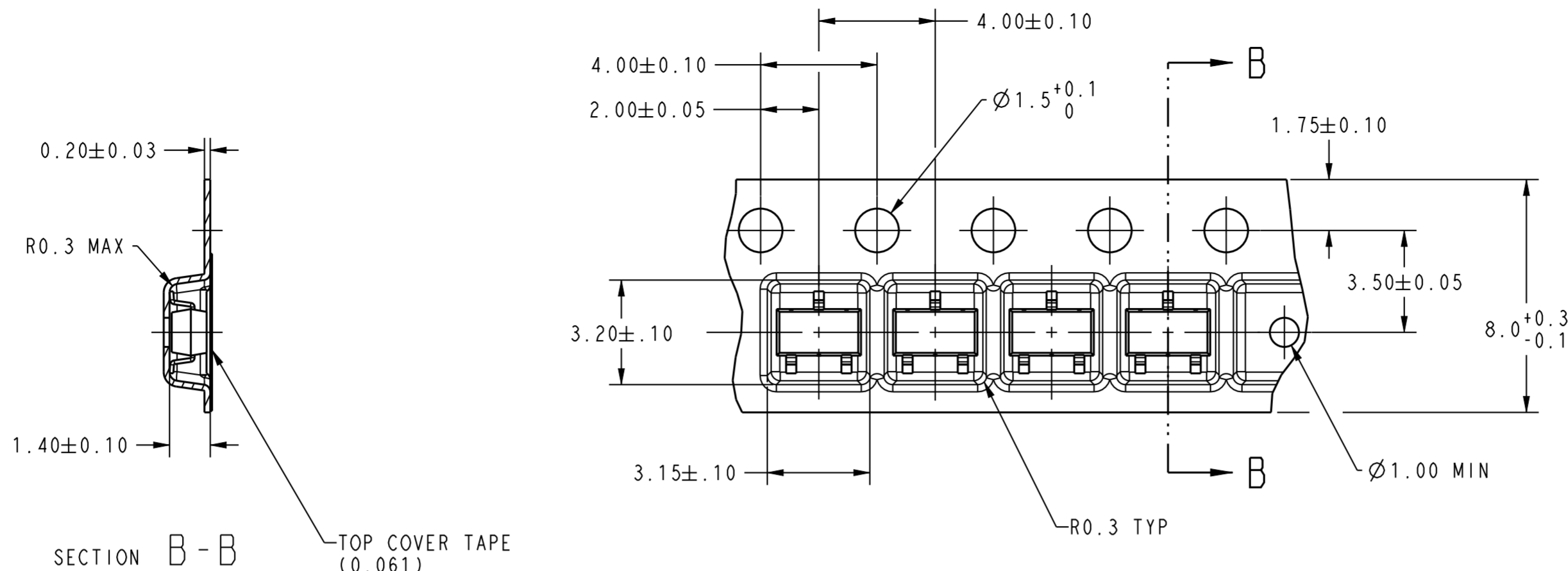
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DESIGN UNITS: mm
TOLERANCES UNLESS NOTED:
NO PLACES .X ± 1.000
ONE PLACE .X ± 0.40
TWO PLACE .XX ± 0.150
THREE PLACE .XXX ± 0.005
ANGLES X ± 3.0°

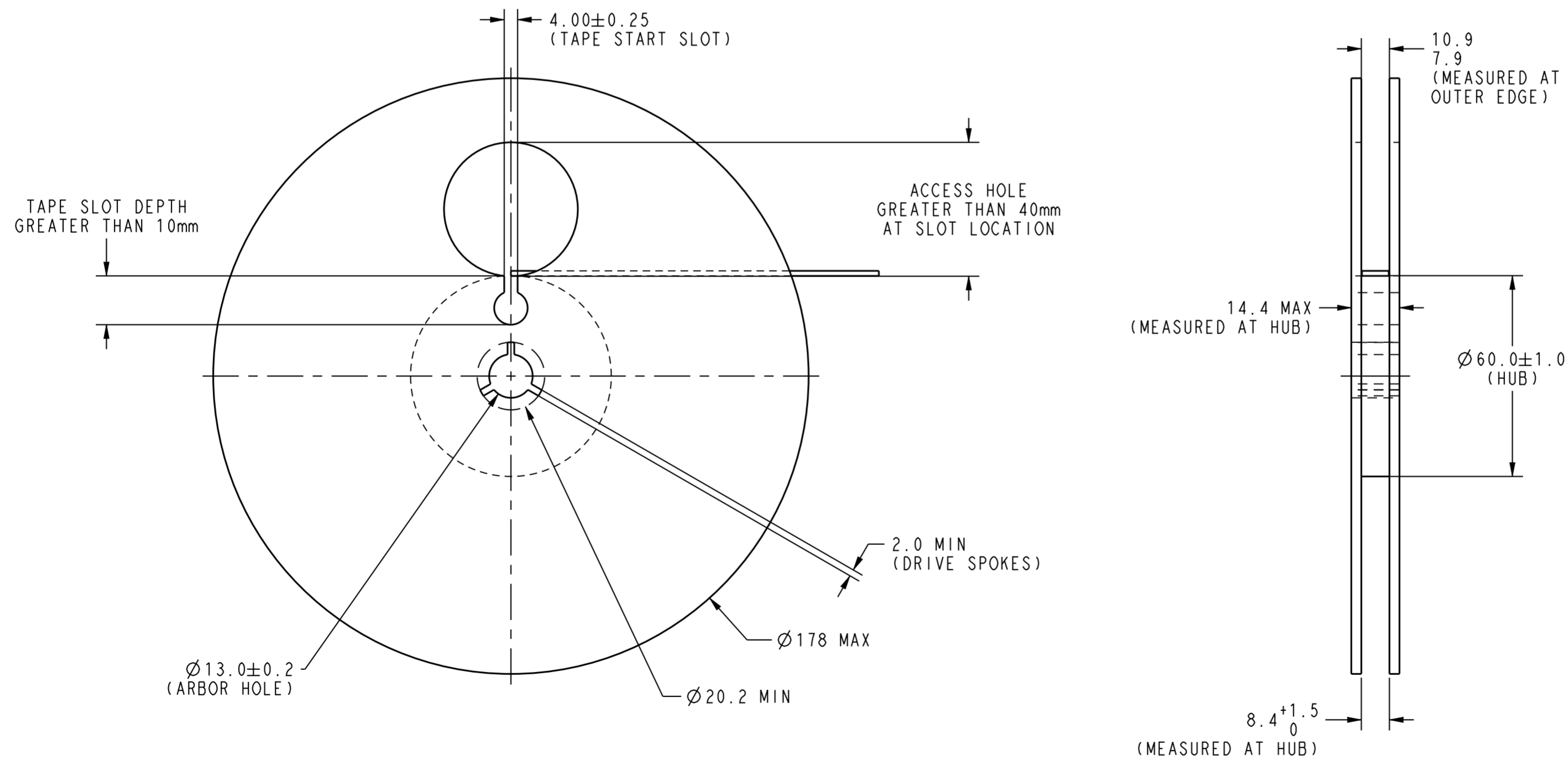


DRAWN	RGA	-
CHECK	-	-
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INTERPRET PER ASME Y14.5M-1994 OTHER HONEYWELL ENGINEERING STANDARDS MAY APPLY		
Pro/ENGINEER		

Honeywell			
TITLE SOLID STATE SENSOR, IC			
SIZE	TYPE	PACKAGE CODE	DRAWING NAME
A2	I	-	SS30F6T
SCALE	20:1		REV 1
SHEET			1 OF 3



TAPE AND REEL DIMENSIONS \square 4



7" 8mm REEL

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SIZE	TYPE	CAGE CODE	DRAWING NAME	REV	
A2	I	-	SS30F6T	1	
SCALE NONE			SHEET 2 OF 3		

OPERATING CHARACTERISTICS

CHARACTERISTICS AT $4.5V \leq V_s \leq 60V$, $-40^\circ C \leq T_A \leq 150^\circ C$, $I_o=15mA$ 3 6
 UNLESS OTHERWISE SPECIFIED

CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
SUPPLY VOLTAGE	V_s		4.5	24.0	60.0	VOLTS
SUPPLY CURRENT	I_s			3.6	10.0	mA
OUTPUT VOLTAGE (ON)	V_{SAT}	$I_o=15mA$		0.215	0.600	VOLTS
OUTPUT LEAKAGE CURRENT	I_{OH}				10.0	μA
OUTPUT CURRENT LIMITATION	$I_{O(SCP)}$	SHORT CIRCUIT PROTECTION ⁽¹⁾	40			mA
RISE TIME	t_r	$T_A=25^\circ C$			1.5	μS
FALL TIME	t_f	$T_A=25^\circ C$			1.5	μS
ESD (HBM)	V_{ESD}	JEDEC JS-001-2014	+/-16			kV

⁽¹⁾OUTPUT SHORT CIRCUIT PROTECTION

THE SENSOR TURNS OFF THE OUTPUT TRANSISTOR WHEN THE OUTPUT LOAD CURRENT EXCEEDS THE OUTPUT CURRENT LIMIT SPECIFIED IN THE OPERATING CHARACTERISTICS TABLE. THE OUTPUT REMAINS OFF UNTIL THE NEXT $B > B_{OP}$ FIELD APPLICATION WHERE IT WILL RETRY TO TURN ON.

MAGNETIC CHARACTERISTICS

CHARACTERISTICS AT $4.5V \leq V_s \leq 60V$, $T_A=25^\circ C$ 3 6

CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
OPERATE	B_{OP}	$T_A=25^\circ C$		25	65	GAUSS
RELEASE	B_{RP}	$T_A=25^\circ C$	-65	-25		GAUSS
HYSTERESIS	B_{HYS}		30			GAUSS

ABSOLUTE MAXIMUM RATING 2

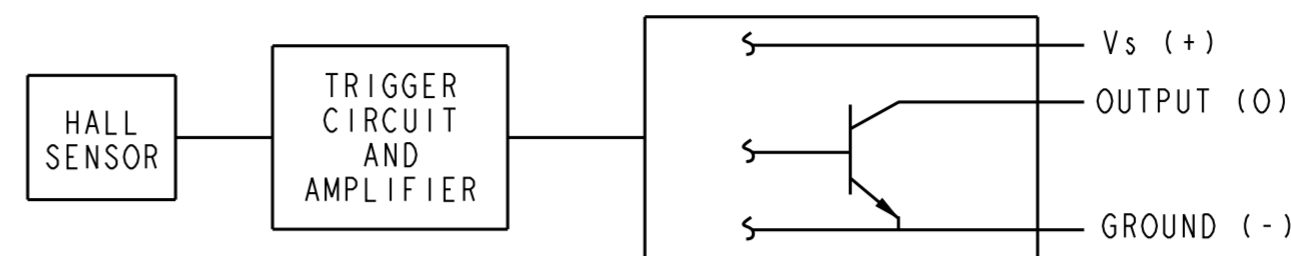
CHARACTERISTIC	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
OPERATING TEMPERATURE	T_A		-40		150	$^\circ C$
JUNCTION TEMPERATURE	T_J		-40		165	$^\circ C$
STORAGE TEMPERATURE	T_S		-40		150	$^\circ C$
THERMAL RESISTANCE	R_{OJA}				233	$^\circ C/W$
SUPPLY VOLTAGE	V_s		-0.5		60	VOLTS
OUTPUT VOLTAGE	V_o		-0.5		60	VOLTS
OUTPUT CURRENT	I_o				NA ⁽²⁾	mA
MAGNETIC FLUX	-B				NO LIMIT	GAUSS

⁽²⁾SEE OUTPUT CURRENT LIMITATION IN ELECTRICAL CHARACTERISTICS

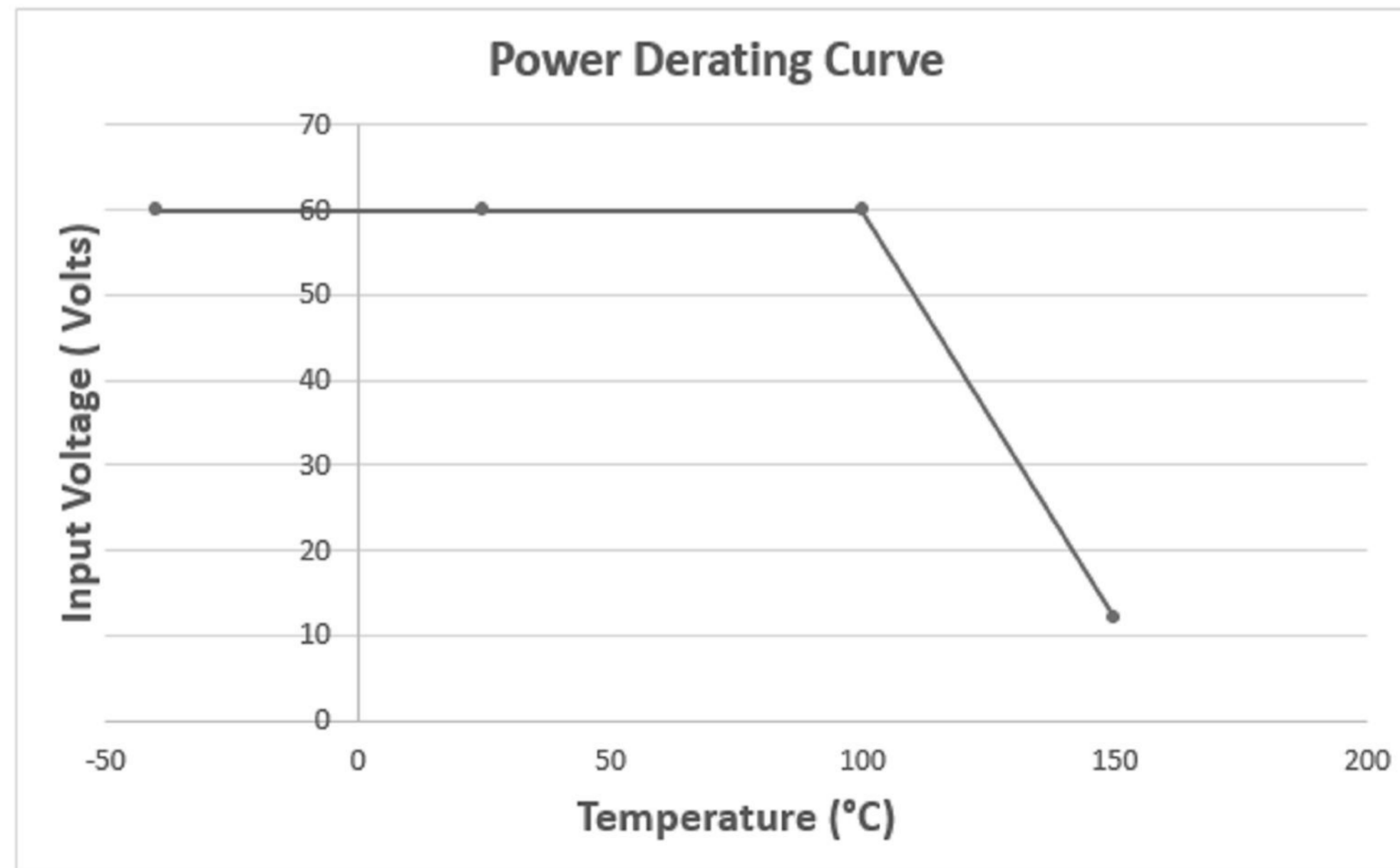
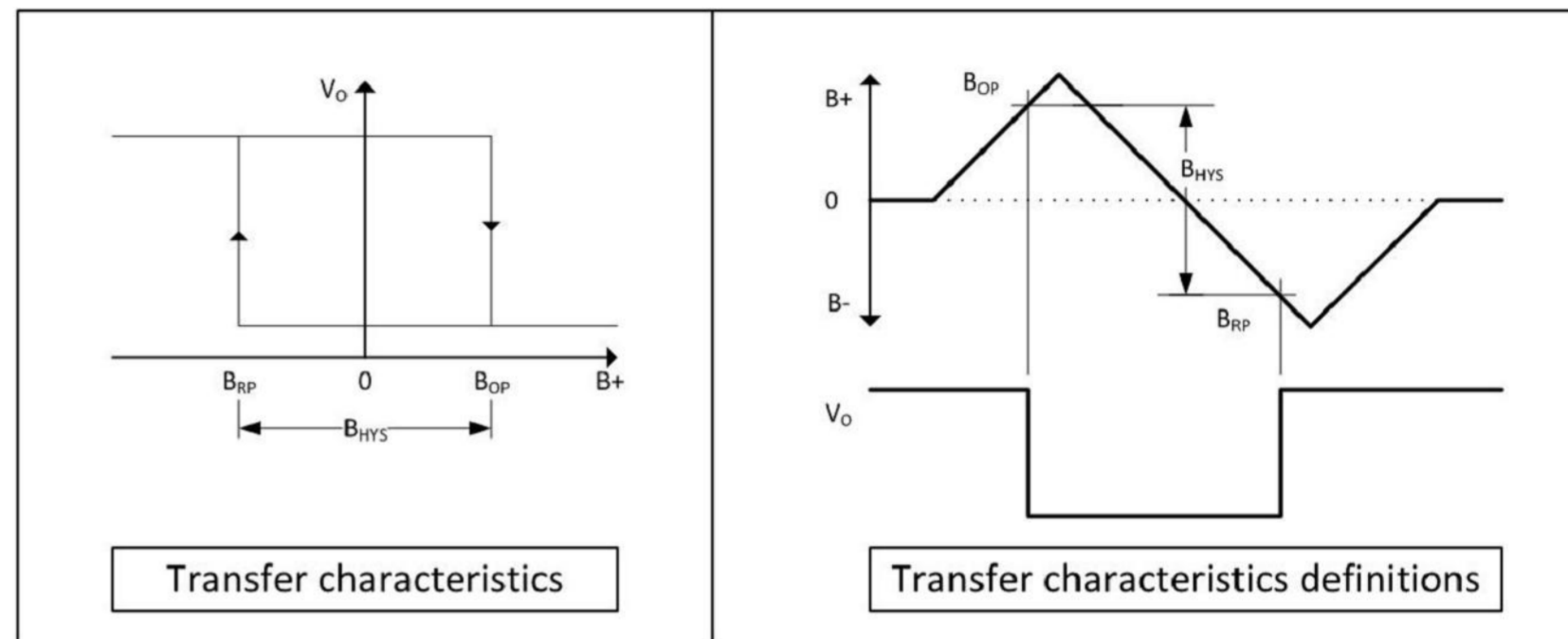
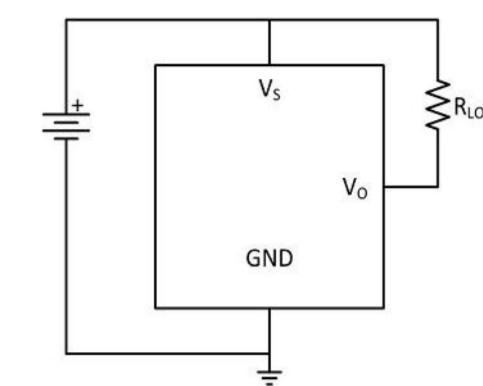
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BLOCK DIAGRAM CURRENT SINKING OUTPUT



BASIC APPLICATION CIRCUIT



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Honeywell			
SIZE	TYPE	CAGE CODE	DRAWING NAME
A2	I	-	SS30F6T
SCALE	NONE	SHEET	3 OF 3
REV	1		