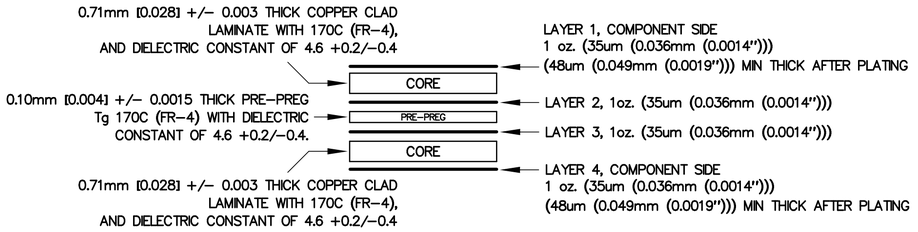
NOTES, UNLESS OTHERWISE SPECIFIED:

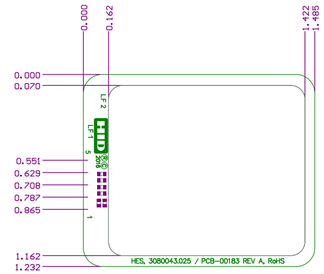
1. FABRICATE AND PROCESS IN ACCORDANCE WITH IPC-A-600 CLASS 2.
2. MATERIAL: FR4 COPPER CLAD GLASS EPOXY LAMINATE, 35um [1oz] COPPER, ALL LAYER. INTERPRET COPPER THICKNESS SPECIFIED AS UNFINISHED WEIGHT. EXPOSED COPPER IS FINISHED TO A GREATER THICKNESS.
3. FINISHED LAMINATE THICKNESS SHALL BE 1.570 +/-0.16mm [0.062 +/- 10%]. LAYER STACK UP SHALL BE IN ACCORDANCE WITH LAYER STACKUP DETAIL IN NOTE 14. ALL PROCESSES AND MATERIALS MUST BE ROHS COMPLIANT. ACCEPTANCE CRITERIA: EACH LOT OF PCB'S DEFINED BY A COMMON DATE CODE MUST HAVE ONE PANEL SUBJECTED TO A CROSS-SECTON ANALYSIS TO VERIFY CONFORMANCE TO ALL FABRICATION SPECIFICATIONS. A REPORT OF THE INSPECTION IS TO BE MAINTAINED BY THE CONTRACT MANUFACTURER AND AVAILABLE UPON REQUEST
4. FABRICATE PRINTED WIRING BOARD USING COMPUTER GENERATED PRODUCTION MASTERS. THE GERBERS FOR THIS DESIGN ARE ARE STORED IN ARTWORK FILE AF PCB-00183 / 3080043.025 .
5. FINISHED HOLE DIAMETER TOLERANCE FOR PLATED AND NONPLATED HOLES SHALL BE IN ACCORDANCE WITH IPC-2615.
6. FINISHED LINE WIDTH TOLERANCE SHALL BE +/- 0.025mm OR +/- 20% OF THE NOMINAL WIDTH PER THE ARTWORK MASTER, WHICHEVER IS SMALLER. IT IS ACCORDING TO GUIDELINES OF IPC-2221A AND IPC-D-325.
7. PLATED THROUGH HOLES SHALL BE COPPER PLATED 18um MINIMUM THICK FOR HOLE LOCATIONS. ACCORDING TO IPC-2221A TABLE 4-3. MINIMUM ANNULAR RING ACCORDING TO IPC-6012B CLASS 2.
8. PLATE EXPOSED CONDUCTOR PATTERN WITH 0.05-0.2um OF IMMERSION GOLD OVER 3-6um ELECTROLESS NICKEL. ELECTROLESS NICKEL IMMERSION GOLD PLATING SHALL BE AS SPECIFIED IN IPC-4552.
9. APPLY POLYMER MASK COATING OVER BARE COPPER IN ACCORDANCE WITH IPC-SM-840, CLASS T, USING GREEN SOLDER MASK MASTERS STORED IN ARTWORK FILE AF PCB-00183 / 3080043.025. POLYMER COATING SHALL BE REGISTERED TO CONDUCTOR PADS WITHIN 0.26mm OF FULL INDICATOR MOVEMENT. VENDOR HAS OPTION TO USE DRY FILM OR LIQUID PHOTO IMAGEABLE.
10. APPLY SILKSCREEN LEGEND USING WHITE PERMANENT INK. VENDOR SHALL MODIFY SILKSCREEN ARTWORK AS REQUIRED TO PREVENT INK FROM CONTAMINATING COMPONENT PADS. MODIFY SILKSCREEN ARTWORK TO INCLUDE CURRENT REVISION LETTER.
11. FOR SCHEMATIC DIAGRAM SEE DRAWING SCH-00181 / 7080043.038.
12. ARTWORK FILE: (GERBER FORMAT 4.2)
    DRILL FILE: PCB-00183 .DRR
    APERTURE FILE: PCB-00183 .APR
    COMPONENT LOCATION (INSERTION) FILE: PCB-00183 .CSV
13.

GERBER FILE		DESCRIPTION	LAYER
PCB-00183	.GTO	TOP SILKSCREEN	TOP SILK
PCB-00183	.GTP	TOP SLDR PASTE	TOP PASTE
PCB-00183	.GTS	TOP SLDR MASK	TOP MASK
PCB-00183	.GTL	LAYER 1	TOP
PCB-00183	.G1	LAYER 2	GND
PCB-00183	.G2	LAYER 3	PWR
PCB-00183	.GBL	LAYER 4	BOT
PCB-00183	.GBS	BOTTOM SLDR MASK	BOT MASK
PCB-00183	.GBP	BOTTOM SLDR PASTE	BOT PASTE
PCB-00183	.GBO	BOTTOM SILKSCREEN	BOT SILK

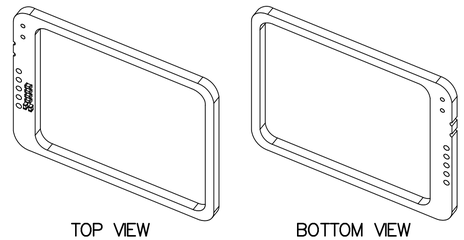
14. LAYER STACKUP DETAIL:



15. CONFORMAL COATING REQUIREMENTS. APPLY POLYURETHANE CONFORMAL COATING 1MIL (min) TO 3MIL (max) THICK THAT MEETS UL FLAME CLASS 94V-0 AND UL746C SPECIFICATIONS. INSPECT BOTH SIDES FOR COVERAGE.
REQUIRED CONFORMAL COATING MATERIAL: HUMISEAL UV40-250. COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND REQUIREMENTS.
CONFORMAL COATING MATERIAL SHALL BE APPLIED AND INSPECTED IN ACCORDANCE WITH IPC-CC-830B.
HATCHED AREAS ON THE CONFORMAL COATING DRAWING INDICATE AREAS TO BE MASKED.
PREVENTATIVE MEASURES SHALL BE USED IN MASKING PREPARATION TO ENSURE COATING DOES NOT CONTAMINATE CONNECTION AREAS.



PCBA REVISIONS		
REV	CR #	DESCRIPTION
1 (A)	17-235	PRODUCTION RELEASE.
2	17-338	ADD ASSY. PN TO TITLE BLOCK. NO DESIGN CHANGE.
3	00852	BLE RFID TUNE. UPDATE C1, C4. REMOVE C3.



TOP VIEW BOTTOM VIEW

TOP OVERLAY
PCB-00183
REV A

TOP PASTE
PCB-00183
REV A

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETER/S [INCHES]
.XX +/- .20 .XXX +/- .100 ANGLES +/- 1
FINISH: N/A
MATERIAL: N/A

DO NOT SCALE DRAWING
SEE SEPARATE APPROVAL LIST
SEE SEPARATE PARTS LIST
THIRD ANGLE PROJECTION
INTERPRET DRAWING PER ANSI/ASME Y14.5M

DESIGNED BY HID GLOBAL FOR HANCHETT ENTRY SYSTEMS, INC.

TITLE: PRINTED WIRING BOARD, APERIO V3 HF-LF RFID ANTENNA
TOP PASTE TOP OVERLAY

SIZE	CAGE CODE	DWG NO:	REV
B		7080043.038	3

SCALE: NONE | 3/6/2019 | SHEET 1 OF 14

NOTES, UNLESS OTHERWISE SPECIFIED:

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PCB-00183	.GBP	BOTTOM SLDR PASTE	BOT PASTE
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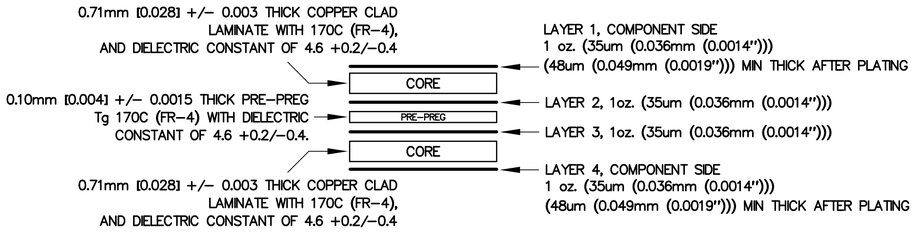
14. LAYER STACKUP DETAIL:



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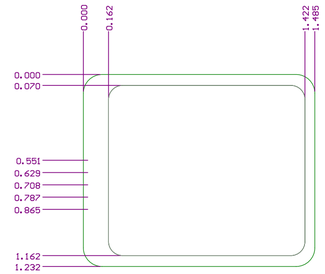

PCBA REVISIONS

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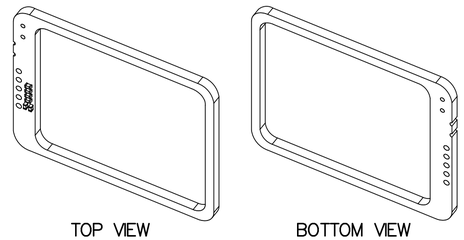

TOP VIEW BOTTOM VIEW

BOTTOM PASTE
PCB-00183
REV A

BOTTOM OVERLAY
PCB-00183
REV A

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MILLIMETER/S [INCHES]

.XX	.XXX	ANGLES
+/- .20	+/- .100	+/- 1

FINISH: N/A

DO NOT SCALE DRAWING
SEE SEPARATE APPROVAL LIST
SEE SEPARATE PARTS LIST
THIRD ANGLE PROJECTION
INTERPRET DRAWING PER ANSI/ASME Y14.5M
MATERIAL: N/A

DESIGNED BY HID GLOBAL FOR HANCHETT ENTRY SYSTEMS, INC.

TITLE:
PRINTED WIRING BOARD,
APERIO V3 HF-LF RFID ANTENNA
BOTTOM OVERLAY BOTTOM PASTE

SIZE	CAGE CODE	DWG NO:	REV
B		7080043.038	3

SCALE: NONE | 3/6/2019 | SHEET 10 OF 14