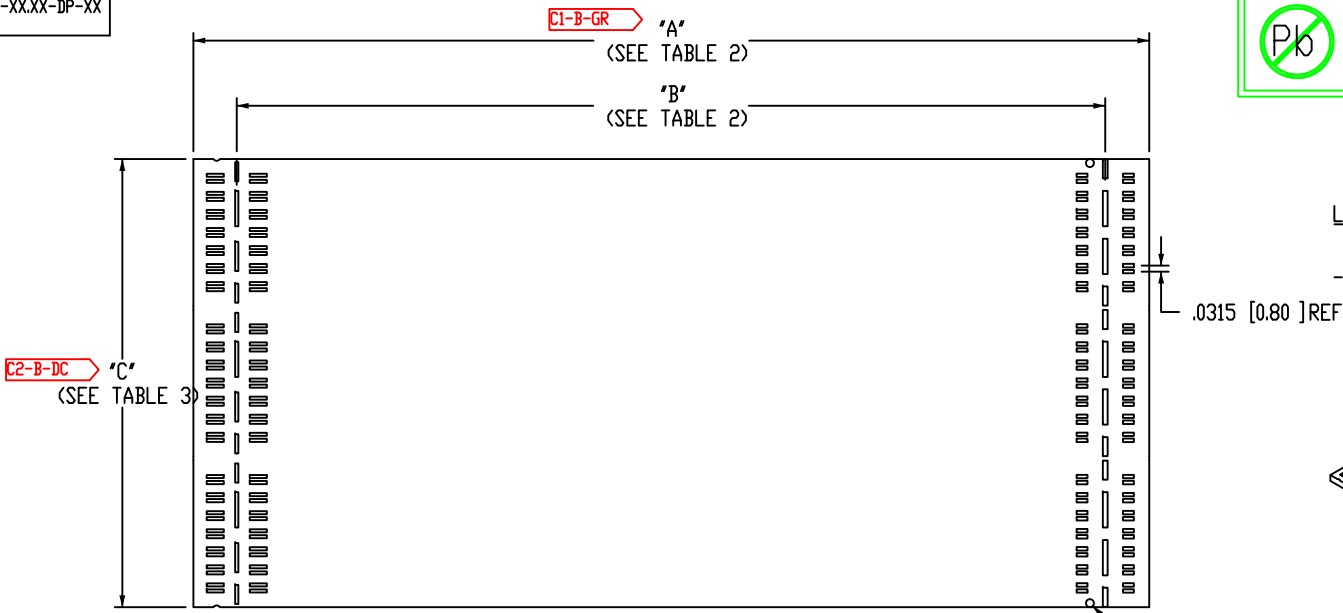


**PK** THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING



PFC-HFEM-XXX-T-XX.XX-DP-XX

No OF POSITIONS  
-014, -028, -042 (PER ROW)

LENGTH  
-03.00: 3.00[76.2] INCHES  
-05.00: 5.00[127.0] INCHES  
-10.00: 10.00[254.0] INCHES

SIGNAL  
-DP: DIFFERENTIAL PAIR

OPTION  
-MH: MOUNTING HOLES  
(SEE FIG.2, SHEET 2)

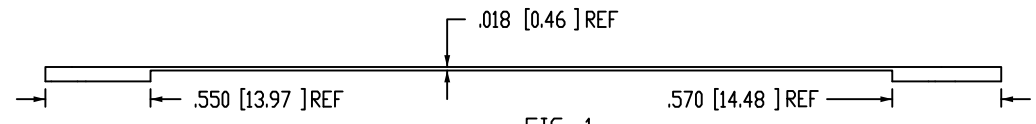
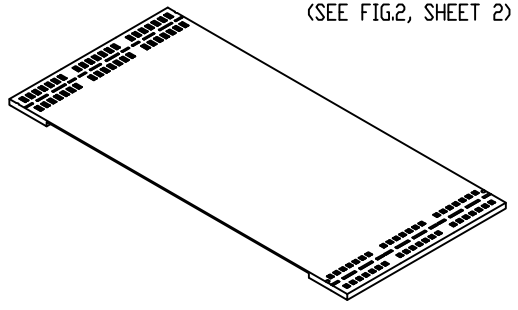


FIG. 1  
PFC-HFEM-042-T-05.00-DP SHOWN

TABLE 2		
LENGTH	"A"	"B"
-03.00	3.00[76.2]	2.54[64.5]
-05.00	5.00[127.0]	4.54[115.3]
-10.00	10.00[254.0]	9.54[242.3]

TABLE 1 ASSEMBLY PART #
PFC-HFEM-014-T-03.00-DP
PFC-HFEM-028-T-03.00-DP
PFC-HFEM-042-T-03.00-DP
PFC-HFEM-014-T-03.00-DP-MH
PFC-HFEM-028-T-03.00-DP-MH
PFC-HFEM-042-T-03.00-DP-MH
PFC-HFEM-014-T-05.00-DP
PFC-HFEM-028-T-05.00-DP
PFC-HFEM-042-T-05.00-DP
PFC-HFEM-014-T-05.00-DP-MH
PFC-HFEM-028-T-05.00-DP-MH
PFC-HFEM-042-T-05.00-DP-MH
PFC-HFEM-014-T-10.00-DP
PFC-HFEM-028-T-10.00-DP
PFC-HFEM-042-T-10.00-DP
PFC-HFEM-014-T-10.00-DP-MH
PFC-HFEM-028-T-10.00-DP-MH
PFC-HFEM-042-T-10.00-DP-MH

- NOTES:
- C1-B-GR** REPRESENTS A CRITICAL DIMENSION.
  - FABRICATION OF THIS FLEX SHALL B E IN CONFORMANCE WITH IPC-6013 CLASS 2.
  - DIMENSIONS ARE IN INCHES.
  - FLAME CLASS TO BE UL 94V-0 AND MUST MEET REQUIREMENTS OF UL796.
  - SEE GERBER PACKAGE FOR HOLE CHART AND PLATING SPECS.
  - SEE GERBER PACKAGE FOR CONDUCTOR GEOMETRY.
  - SEE GERBER PACKAGE FOR STIFFENER TQDL-CHART GEOMETRY.
  - COVERFILM/SOLDERMASK: MUST BE IN ACCORDANCE WITH IPC-6013 CLASS 2.
  - FINISH: IMMERSION GOLD (ENIG) PER IPC-4552
  - FR4 T<sub>g</sub>: MINIMUM GLASS TRANSITION TEMPERATURE (T<sub>g</sub>) OF 170 C.
  - BOW AND TWIST: MAXIMUM ALLOWABLE BOW AND TWIST TO BE IN ACCORDANCE WITH IPC 6013 CLASS 2.
  - ROHS: ALL MATERIALS MUST BE COMPLIANT WITH THE EUROPEAN UNION ROHS DIRECTIVE, 2002/95/EC.
  - LAYER STACK-UP FOR IMPEDANCE:  
LAYER 1-GROUND PLANE  
LAYER 2-100 OHMS SIGNAL (DP) TRACE WIDTH= 0.0056" SPACE= 0.0067"  
LAYER 3 GROUND PLANE  
CONTROLLED IMPEDANCE REQUIREMENT OF ±10%
  - MIN TRACE= 0.0040"; MIN SPACE .0045"

TOLERANCES DO NOT APPLY TO REFERENCE DIMENSIONS, UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.	<b>PROPRIETARY NOTE</b> THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO PFC FLEXIBLE CIRCUITS AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF PFC FLEXIBLE CIRCUITS	<b>PFC FLEXIBLE CIRCUITS</b> 11 CANADIAN ROAD UNIT 7 SCARBOROUGH, ONTARIO PHONE: 416-750-8433 FAX: 416-750-0016 e-Mail sales@pfcflex.com	
		DO NOT SCALE DRAWING SHEET SCALE: 1:1	DESCRIPTION: PFC-HFEM FLEX CIRCUIT DWG. NO. PFC-HFEM-XXX-T-XX.XX-DP-XX BY: PFC 07/11/12 SHEET 1 OF 4

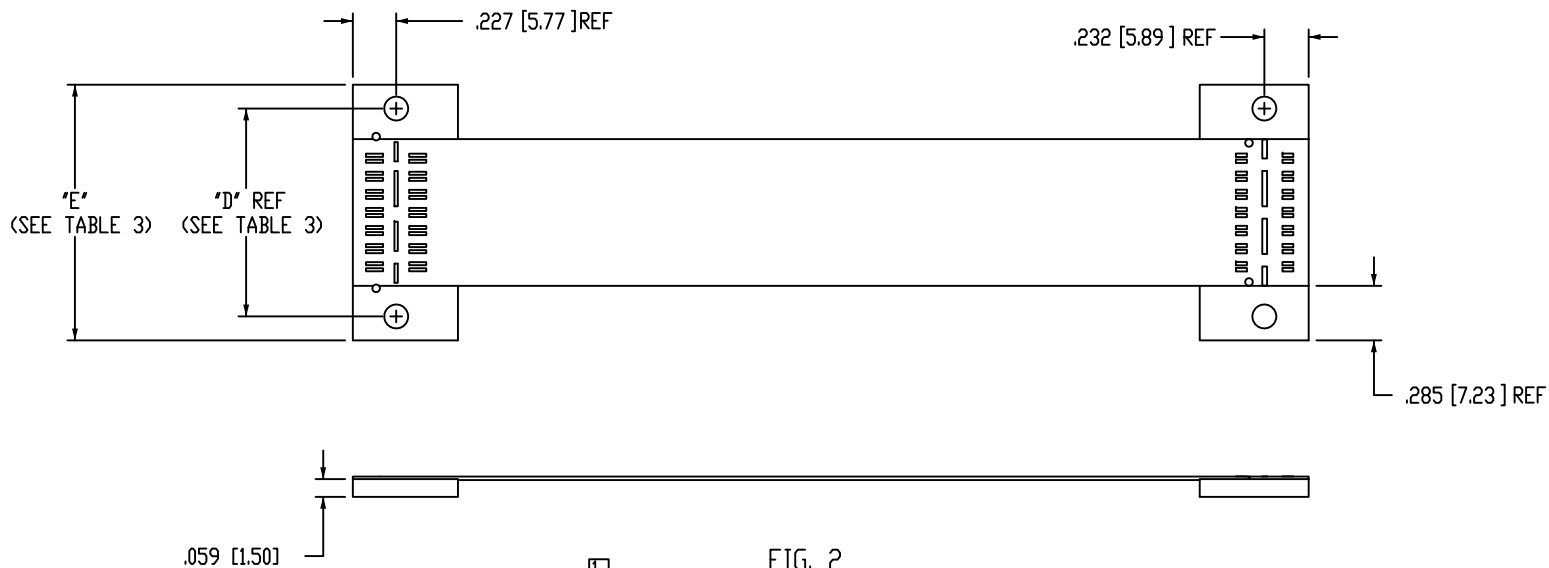


FIG. 2  
-MH OPTION  
(SAME AS FIG. 1, UNLESS OTHERWISE STATED)  
PFC-HFEM-014-T-05.00-DP-MH SHOWN

LAYER STACKUP

FR0110	TOP COVERFILM: 1 MIL KAPTON
	1 MIL ADHESIVE
AC352500	SIGNAL LAYER 1: 1 OZ COPPER
	1 MIL KAPTON
FR0120	3 MIL COVERFILM
FR0200	2 MIL ADHESIVE
	SIGNAL LAYER 2: 1 OZ COPPER
	1 MIL ADHESIVE
FR9131	3 MIL KAPTON
	1 MIL ADHESIVE
	SIGNAL LAYER 3: 1 OZ COPPER
FR0110	1 MIL ADHESIVE
	BOTTOM COVERFILM: 1 MIL KAPTON
LF0200	2 MIL ADHESIVE
FR4	STIFFENERS: 59 MIL
	(93 MIL FOR -MH OPTION)

No. OF POS	"C"	"D"	"E"
-014	.768 +/- .010 [19.50 +/- 0.25]	1.088[27.62]	1.338[33.97]
-028	1.556 +/- .010 [39.52 +/- 0.25]	1.876[47.64]	2.126[53.99]
-042	2.344 +/- .010 [59.54 +/- 0.25]	2.664[67.65]	2.914[74.00]

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	<p>DO NOT SCALE DRAWING</p>	<p>DESCRIPTION: PFC-HFEM FLEX CIRCUIT</p>
<p>SHEET SCALE: 1:1</p>	<p>DWG. NO. PFC-HFEM-XXX-T-XX.XX-DP-XX</p>	
	<p>BY: PFC 07/11/12</p>	<p>SHEET 2 OF 4</p>

TABLE 2						
No. OF POS	"C"	"D"	"E"	QSE-XXX-01-H-D-DP-A	QTE-XXX-01-H-D-DP-A	FLEX
-014	.768 +/- .010 [19.50 +/- 0.25]	1.0875[27.623]	1.3375[33.973]	QSE-014-01-H-D-DP-A	QTE-014-01-H-D-DP-A	3", FE-10100 (QTY:1) 5", FE-10047 (QTY:1) 10", FE-10091 (QTY:1)
-028	1.556 +/- .010 [39.52 +/- 0.25]	1.8755[47.638]	2.1255[53.988]	QSE-028-01-H-D-DP-A	QTE-028-01-H-D-DP-A	3", FE-10100 (QTY:2) 5", FE-10047 (QTY:2) 10", FE-10091 (QTY:2)
-042	2.344 +/- .010 [59.54 +/- 0.25]	2.6635[67.653]	2.9135[74.003]	QSE-042-01-H-D-DP-A	QTE-042-01-H-D-DP-A	3", FE-10100 (QTY:3) 5", FE-10047 (QTY:3) 10", FE-10091 (QTY:3)

PFC-HFEM-XXX-T-XX.XX-DP-XX

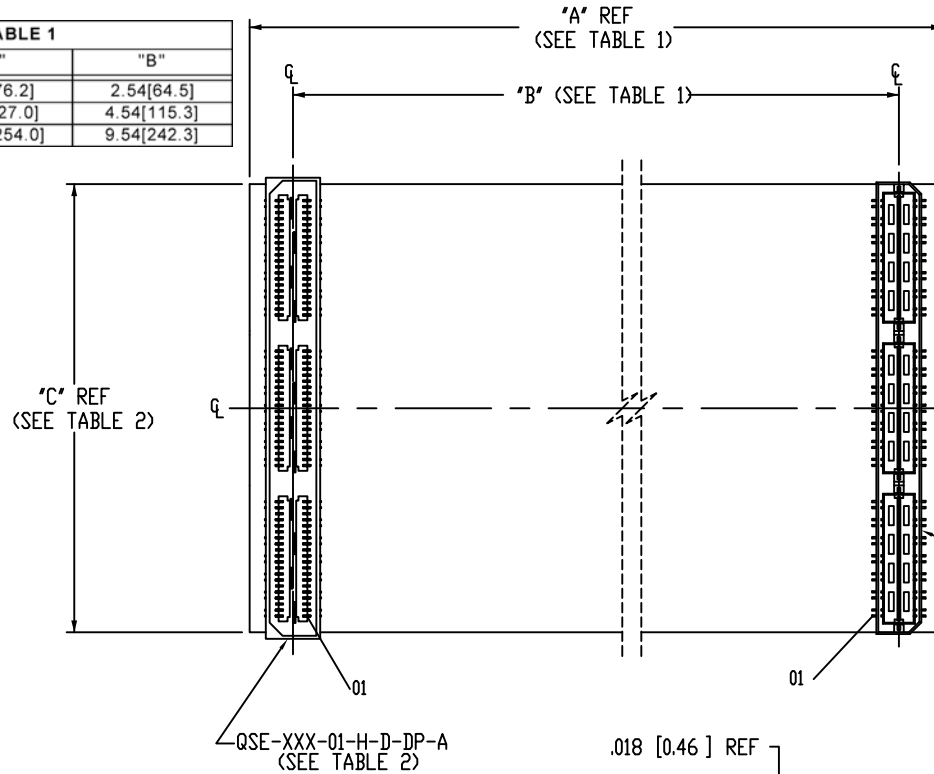
No OF POSITIONS  
-014, -028, -042 (PER ROW)

TRANSFER END  
(MALE-FEMALE)

OPTION  
-MH: MOUNTING HOLES  
(SEE FIG. 2, SHEET 2  
AND  
FIG. 3, SHEET 3)  
(LEAVE BLANK FOR  
STANDARD)

-DP: DIFFERENTIAL PAIRS  
LENGTH  
-03.00: 3.00[76.2] INCHES  
-05.00: 5.00[127.0] INCHES  
-10.00: 10.00[254.0] INCHES

TABLE 1		
LENGTH	"A"	"B"
-3.00	3.00[76.2]	2.54[64.5]
-5.00	5.00[127.0]	4.54[115.3]
-10.00	10.00[254.0]	9.54[242.3]

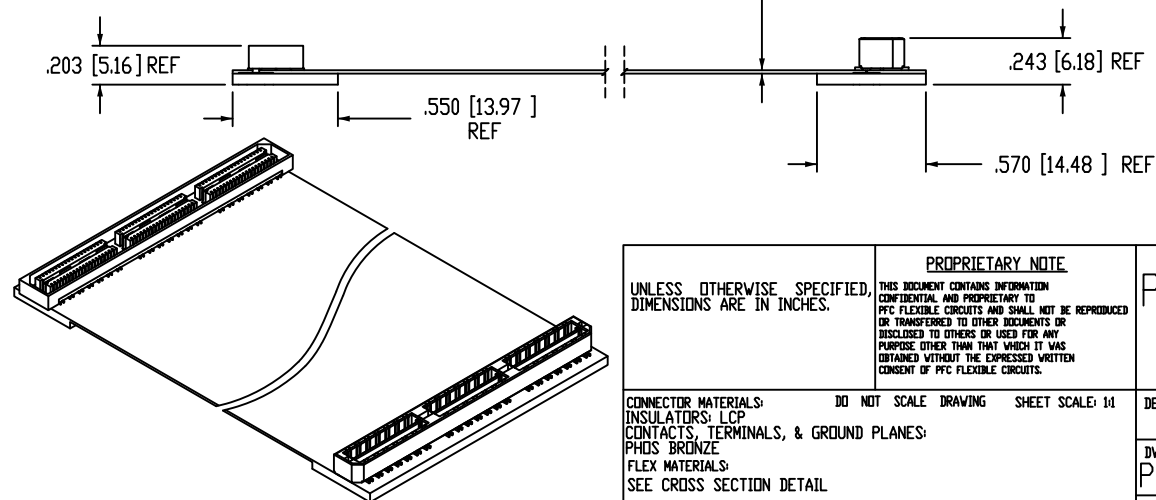


- NOTE:
- Ⓢ REPRESENTS A CRITICAL DIMENSION.
  - ALL DIMENSIONS TO BE SYMMETRICAL ABOUT CENTERLINE WITHIN ±0.02[0.5] UNLESS OTHERWISE STATED.
  - SE OPTION DELETED. ORDER HFEM-060-T-10.00-SE UNDER NEW PART NUMBER: SCF-109260-01-DL.
  - PARTS TO BE IN LATER FOAM PACKAGE
  - ALL SIGNALS ROUTED PIN TO PIN, (E.G. 1 TO 1, 2 TO 2, ETC.)
  - PARTS TO BE ROHS COMPLIANT
  - SOLDER TYPE: NO CLEAN LEAD-FREE

**PK** THIS PRODUCT MANUFACTURED WITH LEAD-FREE PROCESSING

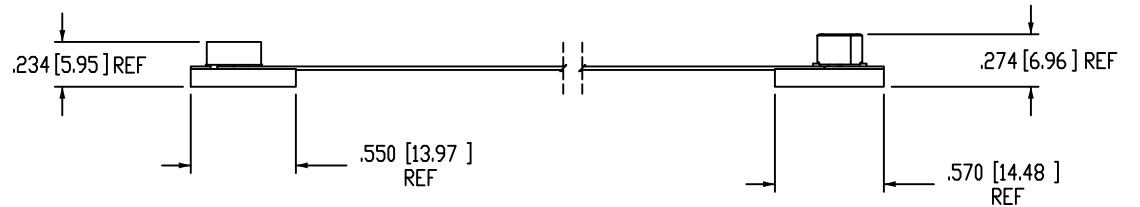
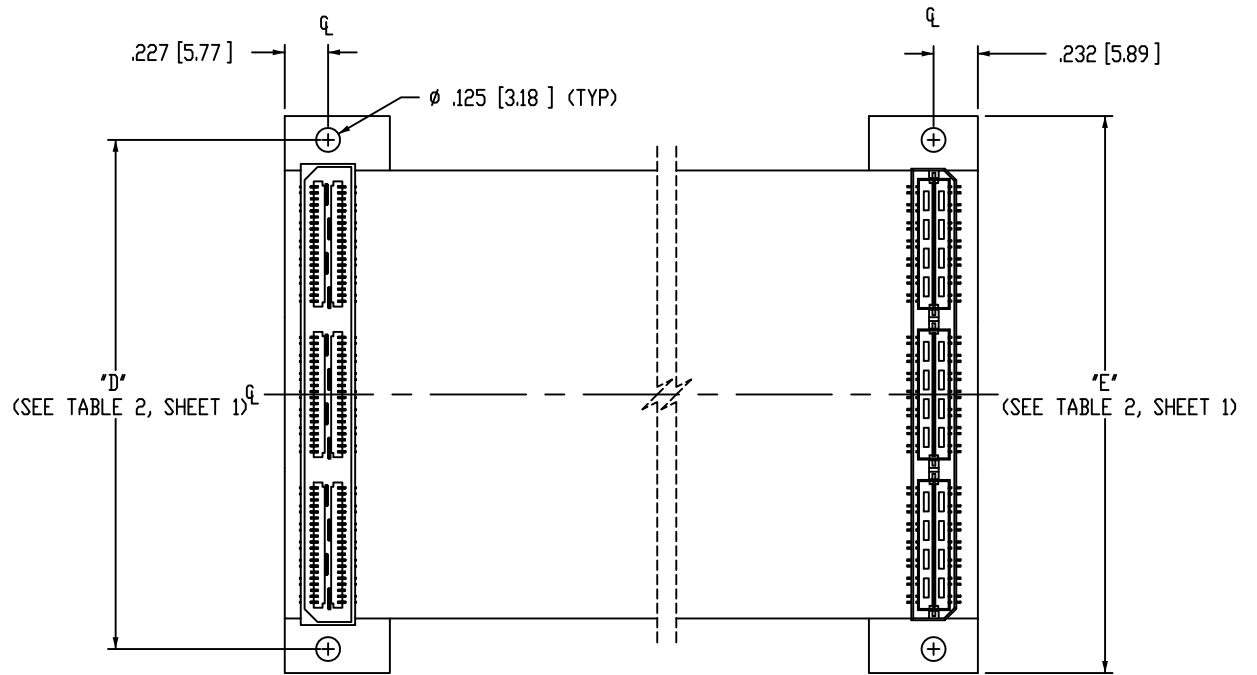
FIG. 1  
PFC-HFEM-042-T-10.00-DP SHOWN

TABLE 3 (FOR FLEX MANUFACTURING REFERENCE)	
PART NUMBER	
PFC-HFEM-014-T-03.00-DP	
PFC-HFEM-014-T-03.00-DP-MH	
PFC-HFEM-028-T-03.00-DP	
PFC-HFEM-028-T-03.00-DP-MH	
PFC-HFEM-042-T-03.00-DP	
PFC-HFEM-042-T-03.00-DP-MH	
PFC-HFEM-014-T-05.00-DP	
PFC-HFEM-014-T-05.00-DP-MH	
PFC-HFEM-028-T-05.00-DP	
PFC-HFEM-028-T-05.00-DP-MH	
PFC-HFEM-042-T-05.00-DP	
PFC-HFEM-042-T-05.00-DP-MH	
PFC-HFEM-014-T-10.00-DP	
PFC-HFEM-014-T-10.00-DP-MH	
PFC-HFEM-028-T-10.00-DP	
PFC-HFEM-028-T-10.00-DP-MH	
PFC-HFEM-042-T-10.00-DP	
PFC-HFEM-042-T-10.00-DP-MH	



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.	PROPRIETARY NOTE THIS DOCUMENT CONTAINS INFORMATION CONFIDENTIAL AND PROPRIETARY TO PFC FLEXIBLE CIRCUITS AND SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY PURPOSE OTHER THAN THAT WHICH IT WAS OBTAINED WITHOUT THE EXPRESSED WRITTEN CONSENT OF PFC FLEXIBLE CIRCUITS.	PFC FLEXIBLE CIRCUITS 11 CANADIAN ROAD UNIT 7 SCARBOROUGH, ONTARIO PHONE: 416-750-8433 FAX: 416-750-0016 e-Mail sales@pfcflex.com
	DO NOT SCALE DRAWING SHEET SCALE: 1:1	
CONNECTOR MATERIALS: INSULATORS: LCP CONTACTS, TERMINALS, & GROUND PLANES: PHOS BRONZE FLEX MATERIALS: SEE CROSS SECTION DETAIL	DESCRIPTION: HIGH SPEED FLEX 0.8mm ASSEMBLY	JWG, ND PFC-HFEM-XXX-T-XX.XX-DP-XXX
	BY: PFC	07/11/2012 SHEET 3 OF 4

FIG. 2  
 -MH OPTION  
 (SAME AS FIG. 1, UNLESS OTHERWISE STATED)  
 PFC-HFEM-042-T-10.00-DP-MH SHOWN



COVERFILM	[REPRESENTATIVE THICKNESS]	.001[0.03] POLYIMIDE .001[0.03] ADHESIVE
COPPER CLAD	[REPRESENTATIVE THICKNESS]	1 oz COPPER .001[0.03] POLYIMIDE
COVERFILM	[REPRESENTATIVE THICKNESS]	.001[0.03] ADHESIVE .002[0.05] POLYIMIDE
ADHESIVE	[REPRESENTATIVE THICKNESS]	.002[0.05] ADHESIVE
COPPER CLAD	[REPRESENTATIVE THICKNESS]	1 oz COPPER .001[0.03] ADHESIVE .003[0.08] POLYIMIDE .001[0.03] ADHESIVE 1 oz COPPER
COVERFILM	[REPRESENTATIVE THICKNESS]	.001[0.03] POLYIMIDE .001[0.03] ADHESIVE
ADHESIVE	[REPRESENTATIVE THICKNESS]	.002[0.05] ADHESIVE
STIFFENER	[REPRESENTATIVE THICKNESS]	STANDARD: .059[1.50] FR4 -MH OPTION: .093[2.36] FR4

CROSS SECTION OF  
 FLEX & STIFFENER  
 NOT TO SCALE

<p><b>PROPRIETARY NOTE</b>                  THIS DOCUMENT CONTAINS INFORMATION                  CONFIDENTIAL AND PROPRIETARY TO                  PFC FLEXIBLE CIRCUITS AND SHALL NOT BE REPRODUCED                  OR TRANSFERRED TO OTHER DOCUMENTS OR                  DISCLOSED TO OTHERS OR USED FOR ANY                  PURPOSE OTHER THAN THAT WHICH IT WAS                  OBTAINED WITHOUT THE EXPRESSED WRITTEN                  CONSENT OF PFC FLEXIBLE CIRCUITS</p> <p>DO NOT SCALE DRAWING</p> <p>SHEET SCALE: 1:1</p>	<p><b>PFC FLEXIBLE CIRCUITS</b></p> <p>11 CANADIAN ROAD UNIT 7 SCARBOROUGH, ONTARIO                  PHONE: 416-750-8433 FAX: 416-750-0016                  e-Mail sales@pfcflex.com</p>	
	<p>DESCRIPTION:                  HIGH SPEED FLEX 0.8mm ASSEMBLY</p>	
	<p>DWG. NO.                  PFC-HFEM-XXX-T-XX.XX-DP-XXX</p>	
	<p>BY: PFC</p>	<p>07/11/2012</p>