FERMILAB Technical Division

QUALITY CONTROL REPORT

DATE=7/11/2008 TIME=2:08:45 PM

PART NAME : PN457528-n-v5-IL NR-04
REV NUMBER :
SER NUMBER :
STATS COUNT : 1

457528-n
DESY 1.3GHZ TESTLA
SINGLE CELL RF CAVITY
ASSEMBLY

'Inspected by ' : Oscar Lira
'Sample Number' : RF88170 NR-04
' ' : 0807111050

MM DIM LOC1= LOCATION OF PLANE PLNC FLANGE1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	196.000	196.358	0.358	0.500	0.500	0.000
FL	0.000	0.051	0.051	0.400	0.000	0.000

MM DIM LOC2= LOCATION OF PLANE PLNC FLANGE2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-196.000	-196.357	-0.357	0.500	0.500	0.000
FL	0.000	0.051	0.051	0.400	0.000	0.000

MM DIM LOC3= LOCATION OF PLANE PLNC SS F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	195.000	195.346	0.346	0.500	0.500	0.000
FL	0.000	0.038	0.038	0.400	0.000	0.000

MM DIM LOC4= LOCATION OF PLANE PLNC SS F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-195.000	-195.376	-0.376	0.500	0.500	0.000
FL	0.000	0.039	0.039	0.400	0.000	0.000

MM DIM LOC5= LOCATION OF PLANE PLNC BT F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	196.000	195.341	-0.659	0.500	0.500	0.159
FL	0.000	0.022	0.022	0.400	0.000	0.000

MM DIM LOC6= LOCATION OF PLANE PLNC BT F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-196.000	-195.374	0.626	0.500	0.500	0.126
FL	0.000	0.030	0.030	0.400	0.000	0.000

⊥ MM DIM PERP1= PERPEND OF PLANE PLNC FLANGE1,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.452	0.452	0.400	0.000	0.052

⊥ MM DIM PERP2= PERPEND OF PLANE PLNC FLANGE2,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.237	0.237	0.400	0.000	0.000

// MM DIM PARL1= PARALLEL OF PLANE PLNC FLANGE1,RFS TO PLANE PLNC FLANGE2,RFS EXTEND=0.000

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.555	0.555	0.400	0.000	0.155

⊞ MM DIM LOC7= LOCATION OF PLANE PLNC FLANGE1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	0.99999	0.00344	0.00016			

⊞ MM DIM LOC8= LOCATION OF PLANE PLNC FLANGE2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	0.00032	0.00179			

⊞ MM DIM LOC9= LOCATION OF PLANE PLNC SS F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	0.99999	0.00333	0.00016			

⊞ MM DIM LOC10= LOCATION OF PLANE PLNC SS F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	0.00032	0.00179			

⊞ MM DIM LOC11= LOCATION OF PLANE PLNC BT F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	0.99999	0.00322	0.00016			

⊞ MM DIM LOC12= LOCATION OF PLANE PLNC BT F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	0.00025	0.00177			

↔ MM DIM DIST1= 2D DISTANCE FROM PLANE PLNC FLANGE1 TO PLANE PLNC FLANGE2 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.716	0.716	1.000	1.000	0.000

↔ MM DIM DIST2= 2D DISTANCE FROM PLANE PLNC FLANGE1 TO PLANE PLNC SS F1 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1.000	1.012	0.012	0.100	0.000	0.000

MM DIM DIST3= 2D DISTANCE FROM PLANE PLNC FLANGE2 TO PLANE PLNC SS F2 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	1.000	0.981	-0.019	0.100	0.000	0.019

MM DIM DIST4= 2D DISTANCE FROM POINT PNT FLANGE1-2 TO POINT PNT FLANGE2-2 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.465	0.465	1.000	1.000	0.000

MM DIM DIST5= 2D DISTANCE FROM POINT PNT FLANGE1-5 TO POINT PNT FLANGE2-5 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.780	0.780	1.000	1.000	0.000

MM DIM DIST6= 2D DISTANCE FROM POINT PNT FLANGE1-8 TO POINT PNT FLANGE2-8 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.989	0.989	1.000	1.000	0.000

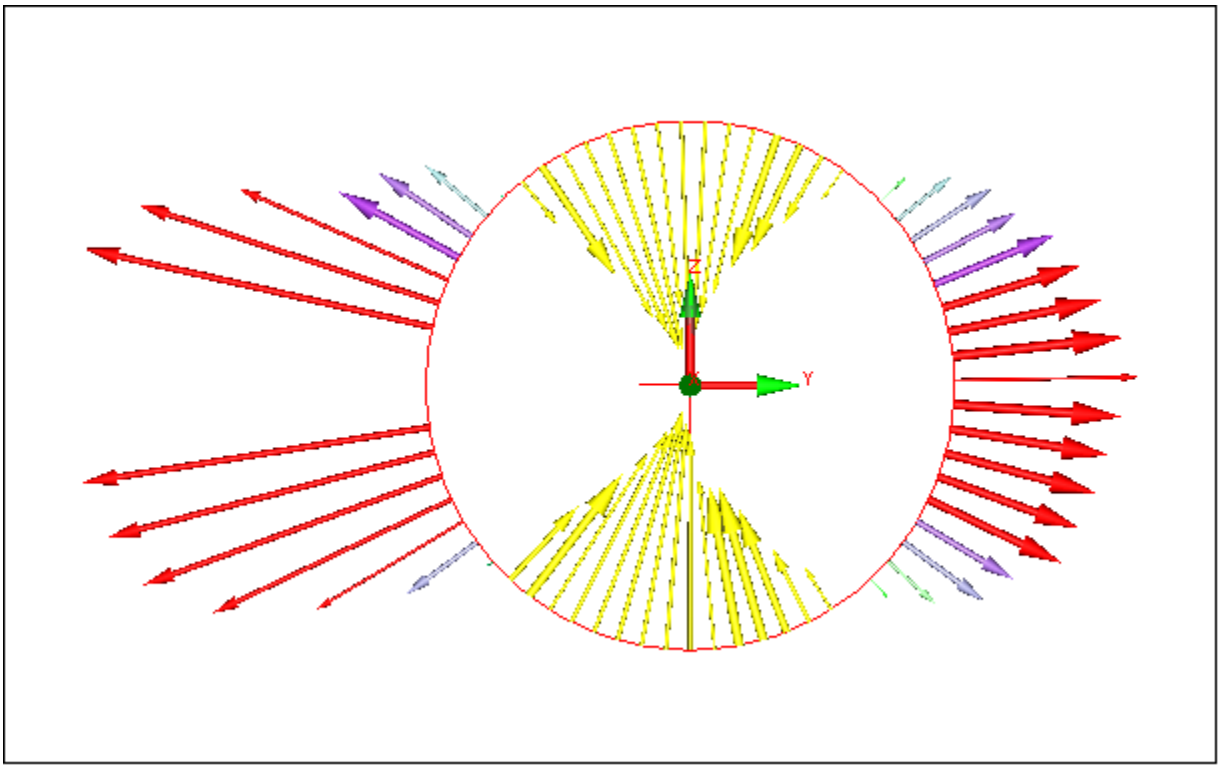
MM DIM DIST7= 2D DISTANCE FROM POINT PNT FLANGE1-11 TO POINT PNT FLANGE2-11 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.622	0.622	1.000	1.000	0.000

MM DIM LOC13= LOCATION OF CIRCLE CIR BT ID1

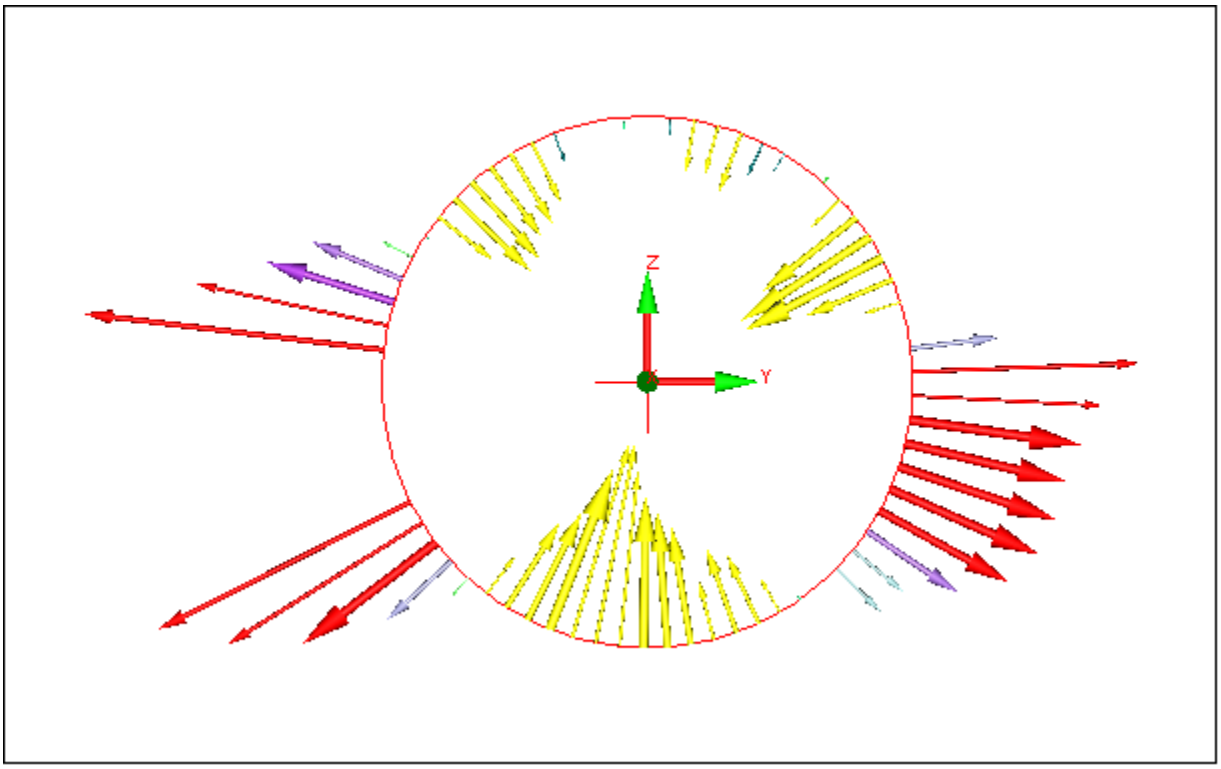
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.349	0.349	10.000	10.000	0.000
Y	0.000	0.000	0.000	0.000	0.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	78.000	77.979	-0.021	0.000	0.000	0.021
RN	0.000	0.176	0.176	0.050	0.000	0.126

BEAM TUBE ID 1 SKIPPING THE WELD
SEE LOC13


Z
Y

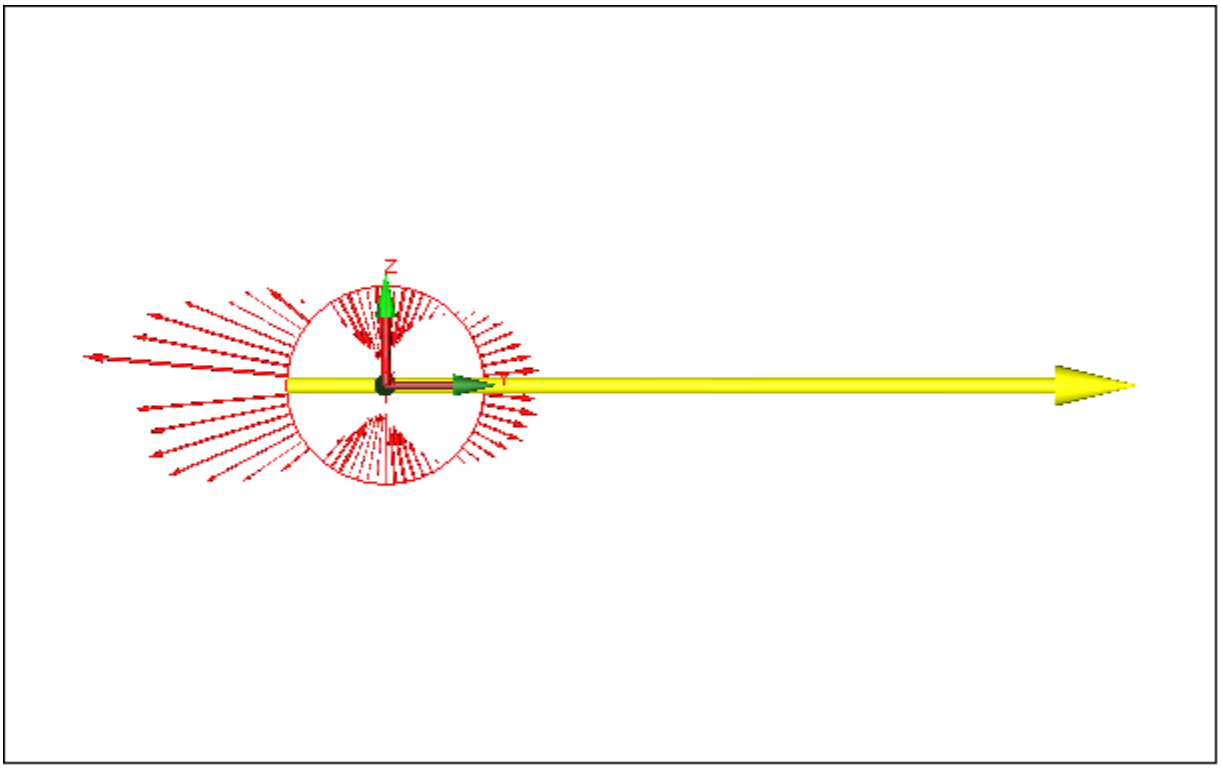
MM	DIM LOC14= LOCATION OF CIRCLE CIR BT ID2					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-193.000	-193.201	-0.201	10.000	10.000	0.000
Y	0.000	0.000	0.000	0.000	0.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	78.000	77.951	-0.049	0.050	0.000	0.049
RN	0.000	0.149	0.149	0.050	0.000	0.099

BEAM TUBE ID 2 SKIPPING THE WELD
SEE LOC14



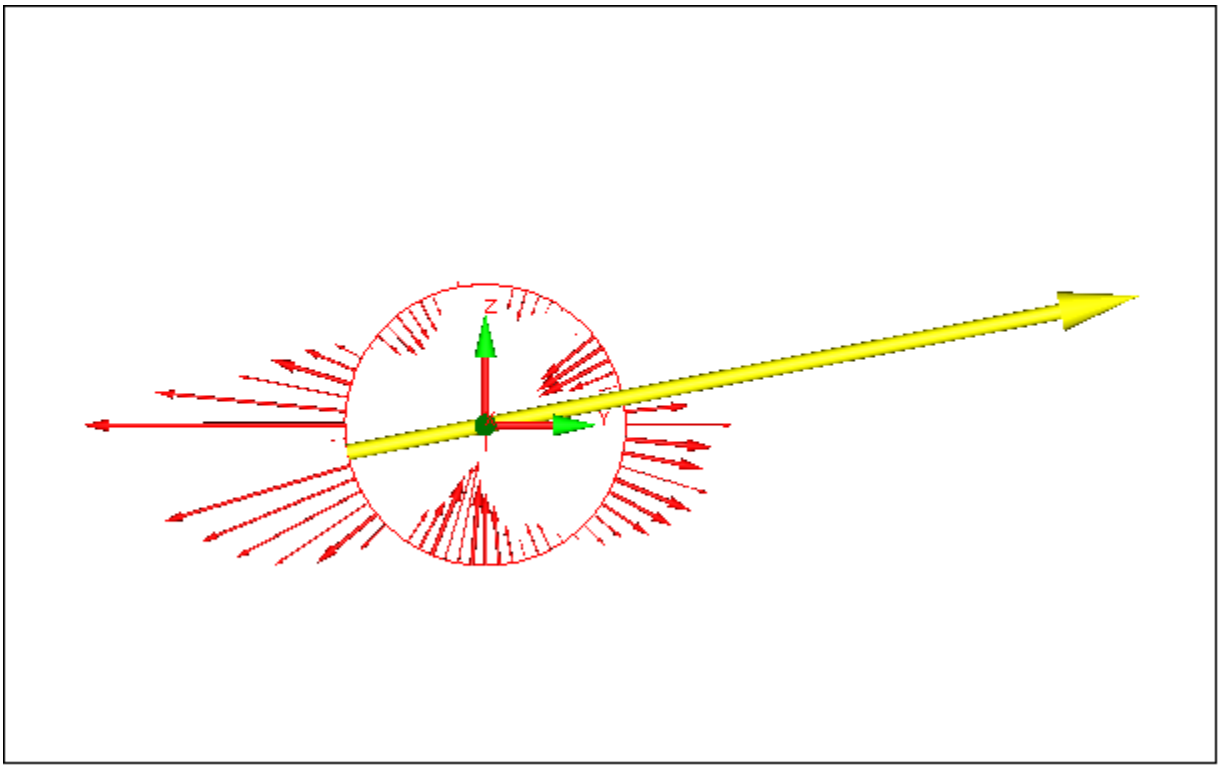
MM	DIM LOC29= LOCATION OF CIRCLE CIR BT ID1B					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.349	0.349	10.000	10.000	0.000
Y	0.000	0.014	0.014	0.000	0.000	0.014
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	78.000	77.963	-0.037	0.050	0.000	0.037
RN	0.000	0.833	0.833	0.050	0.000	0.783

BEAM TUBE ID 1B WITH WELD
SEE LOC29



MM	DIM LOC30= LOCATION OF CIRCLE CIR BT ID2B					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-193.000	-193.201	-0.201	10.000	10.000	0.000
Y	0.000	0.002	0.002	0.000	0.000	0.002
Z	0.000	0.001	0.001	0.000	0.000	0.001
D	78.000	77.947	-0.053	0.050	0.000	0.053
RN	0.000	0.593	0.593	0.050	0.000	0.543

BEAM TUBE ID 2B WITH WELD
SEE LOC30



MM DIM LOC15= LOCATION OF CIRCLE CIRC BC D1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.349	0.349	10.000	10.000	0.000
Y	0.000	0.164	0.164	0.150	0.150	0.014
Z	0.000	0.097	0.097	0.150	0.150	0.000
D	120.000	119.983	-0.017	0.150	0.150	0.000
RN	0.000	0.076	0.076	0.150	0.000	0.000

MM DIM LOC16= LOCATION OF CIRCLE CIRC BC D2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-193.000	-193.201	-0.201	10.000	10.000	0.000
Y	0.000	0.133	0.133	0.150	0.150	0.000
Z	0.000	-0.019	-0.019	0.150	0.150	0.000
D	120.000	119.890	-0.110	0.150	0.150	0.000
RN	0.000	0.211	0.211	0.150	0.000	0.061

MM DIM LOC17= LOCATION OF CIRCLE CIRC HC1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	4.500	4.500	0.000	1.000	1.000	0.000
Y	0.000	-0.190	-0.190	0.100	0.100	0.090
Z	0.000	-0.106	-0.106	0.100	0.100	0.006
D	210.300	211.351	1.051	0.050	0.000	1.001
RN	0.000	0.175	0.175	0.050	0.000	0.125

MM DIM LOC18= LOCATION OF CIRCLE CIRC HC2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-4.500	-4.496	0.004	1.000	1.000	0.000
Y	0.000	-0.299	-0.299	0.100	0.100	0.199
Z	0.000	-0.246	-0.246	0.100	0.100	0.146
D	210.300	211.310	1.010	0.050	0.000	0.960
RN	0.000	0.336	0.336	0.050	0.000	0.286

MM DIM LOC19= LOCATION OF CIRCLE CIRC BTOD1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	57.000	61.002	4.002	1.000	1.000	3.002
Y	0.000	-0.469	-0.470	0.100	0.100	0.370
Z	0.000	-0.030	-0.030	0.100	0.100	0.000
D	81.500	83.304	1.804	0.100	0.050	1.704
RN	0.000	0.533	0.533	0.150	0.000	0.383

MM DIM LOC20= LOCATION OF CIRCLE CIRC BTOD2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-57.000	-60.999	-3.999	1.000	1.000	2.999
Y	0.000	-0.290	-0.290	0.100	0.100	0.190
Z	0.000	-0.154	-0.154	0.100	0.100	0.054
D	81.500	83.368	1.868	0.100	0.050	1.768
RN	0.000	0.527	0.527	0.150	0.000	0.377

DEG DIM ANGL1= 2D ANGLE (TRUE) FROM LINE LINC OFFSET1 TO LINE LINC OFFSET2

AX	NOMINAL	MEAS	DEV
A	0.000	3.942	3.942

MM	DIM LOC21= LOCATION OF LINE LINC OFFSET1		
AX	NOMINAL	MEAS	DEV
V	-0.00017	-0.00000	1.00000

MM	DIM LOC22= LOCATION OF LINE LINC OFFSET2		
AX	NOMINAL	MEAS	DEV
V	-0.00016	-0.06875	0.99763

MM	DIM LOC25= LOCATION OF CIRCLE CIR F1 SS ID					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
D	109.200	109.011	-0.189	0.200	0.000	0.189
RN	0.000	0.018	0.018	0.200	0.000	0.000

MM	DIM LOC26= LOCATION OF CIRCLE CIR F2 SS ID					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
D	109.200	109.051	-0.149	0.200	0.000	0.149
RN	0.000	0.092	0.092	0.200	0.000	0.000

MM	DIM LOC28 ATTACH RING LEFT BOTT= LOCATION OF PLANE PLNC ARLB					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-112.000	-112.595	-0.595	0.500	0.500	0.095
FL	0.000	0.021	0.021	0.400	0.000	0.000

MM	DIM LOC29 ATTACH RING LEFT TOP= LOCATION OF PLANE PLNC ARLT					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-112.000	-112.725	-0.725	0.500	0.500	0.225
FL	0.000	0.009	0.009	0.400	0.000	0.000

MM	DIM LOC30 ATTACH RING RIGHT BOTT= LOCATION OF PLANE PLNC ARRB					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	112.000	112.225	0.225	0.500	0.500	0.000
FL	0.000	0.001	0.001	0.400	0.000	0.000

MM	DIM LOC31 ATTACH RING RIGHT TOP= LOCATION OF PLANE PLNC ARRT					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	112.000	112.245	0.245	0.500	0.500	0.000
FL	0.000	0.021	0.021	0.400	0.000	0.000

MM	DIM PERP3= PERPEND OF PLANE PLNC ARLB,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.079	0.079	0.500	0.000	0.000

MM	DIM PERP4= PERPEND OF PLANE PLNC ARLT,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.065	0.065	0.500	0.000	0.000

⊥ MM DIM PERP5= PERPEND OF PLANE PLNC ARRB,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.169	0.169	0.500	0.000	0.000

⊥ MM DIM PERP6= PERPEND OF PLANE PLNC ARRT,RFS TO LINE LINC BEAM AXIS,RFS EXTEND=0.000

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	0.000	0.223	0.223	0.500	0.000	0.000

↔ MM DIM DIST8 ATTACH RING LEFT BOTT= 2D DISTANCE FROM PLANE PLNC FLANGE2 TO PLANE PLNC ARLB PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	84.000	83.762	-0.238	0.500	0.500	0.000

↔ MM DIM DIST9 ATTACH RING LEFT TOP= 2D DISTANCE FROM PLANE PLNC FLANGE2 TO PLANE PLNC ARLT PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	84.000	83.632	-0.368	0.500	0.500	0.000

↔ MM DIM DIST10 ATTACH RING RIGHT BOTT= 2D DISTANCE FROM PLANE PLNC FLANGE1 TO PLANE PLNC ARRB PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	84.000	84.134	0.134	0.500	0.500	0.000

↔ MM DIM DIST11 ATTACH RING RIGHT TOP= 2D DISTANCE FROM PLANE PLNC FLANGE1 TO PLANE PLNC ARRT PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	84.000	84.113	0.113	0.500	0.500	0.000

****** REPORT ABBREVIATIONS MEANINGS******

AR= Attachment Ring

BT= Beam Tube

HC= Half Cell

SS= Sealing Surface

END OF MEASUREMENT FOR
PN=PN457528-n-v5-IL NR-04 DWG= SN=
TOTAL # OF MEAS =72 # OUT OF TOL =40