FERMILAB Technical Division

QUALITY CONTROL REPORT

DATE=7/9/2008 TIME=2:08:05 PM

PART NAME : PN457528-n-v5-IL NR-01
REV NUMBER :
SER NUMBER :
STATS COUNT : 1

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

'Inspected by ' : Oscar Lira
'Sample Number' : RF88169 NR-01
' ' : 0807080140

MM DIM LOC1= LOCATION OF PLANE PLNC FLANGE1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	196.000	196.448	0.448	0.500	0.500	0.000
FL	0.000	0.081	0.081	0.400	0.000	0.000

MM DIM LOC2= LOCATION OF PLANE PLNC FLANGE2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-196.000	-196.447	-0.447	0.500	0.500	0.000
FL	0.000	0.068	0.068	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	195.423	0.423	0.500	0.500	0.000
FL	0.000	0.053	0.053	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	-195.440	-0.440	0.500	0.500	0.000
FL	0.000	0.051	0.051	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	195.419	-0.581	0.500	0.500	0.081
FL	0.000	0.037	0.037	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	-195.432	0.568	0.500	0.500	0.068
FL	0.000	0.031	0.031	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	0.231	0.231	0.400	0.000	0.000

⊥ 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	0.126	0.126	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	0.315	0.315	0.400	0.000	0.000

⊞ MM DIM LOC7= LOCATION OF PLANE PLNC FLANGE1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	1.00000	-0.00165	-0.00029			

⊞ MM DIM LOC8= LOCATION OF PLANE PLNC FLANGE2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	-0.00067	-0.00016			

⊞ MM DIM LOC9= LOCATION OF PLANE PLNC SS F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	1.00000	-0.00168	-0.00030			

⊞ MM DIM LOC10= LOCATION OF PLANE PLNC SS F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	-0.00067	-0.00011			

⊞ MM DIM LOC11= LOCATION OF PLANE PLNC BT F1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	1.00000	-0.00173	-0.00034			

⊞ MM DIM LOC12= LOCATION OF PLANE PLNC BT F2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
V	-1.00000	-0.00069	-0.00004			

↔ 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	392.895	0.895	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	1.024	0.024	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	1.007	0.007	0.100	0.000	0.000

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	393.043	1.043	1.000	1.000	0.043

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	392.787	0.787	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	392.771	0.771	1.000	1.000	0.000

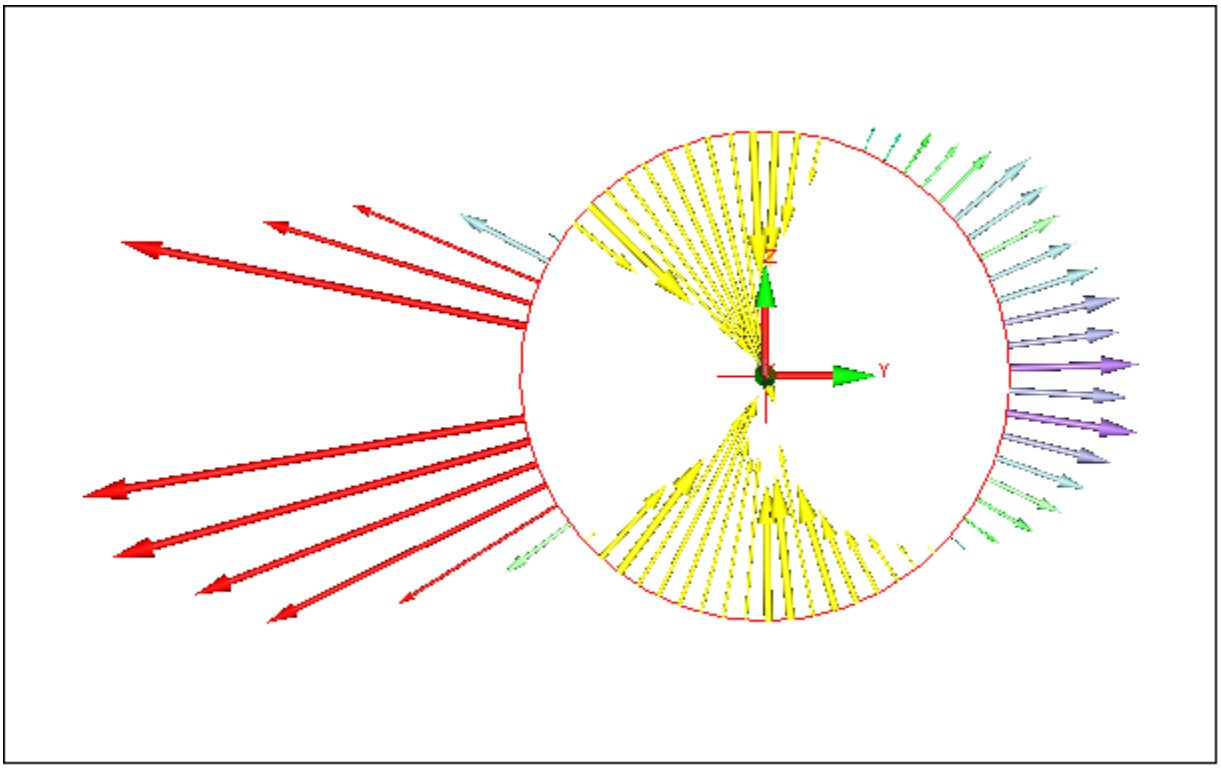
MM DIM DIST7= 2D DISTANCE FROM POINT PNT FLANGE1-11 TO POINT PNT FLANGE2-11 PAR TO XAXIS

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
M	392.000	392.975	0.975	1.000	1.000	0.000

MM DIM LOC13= LOCATION OF CIRCLE CIR BT ID1

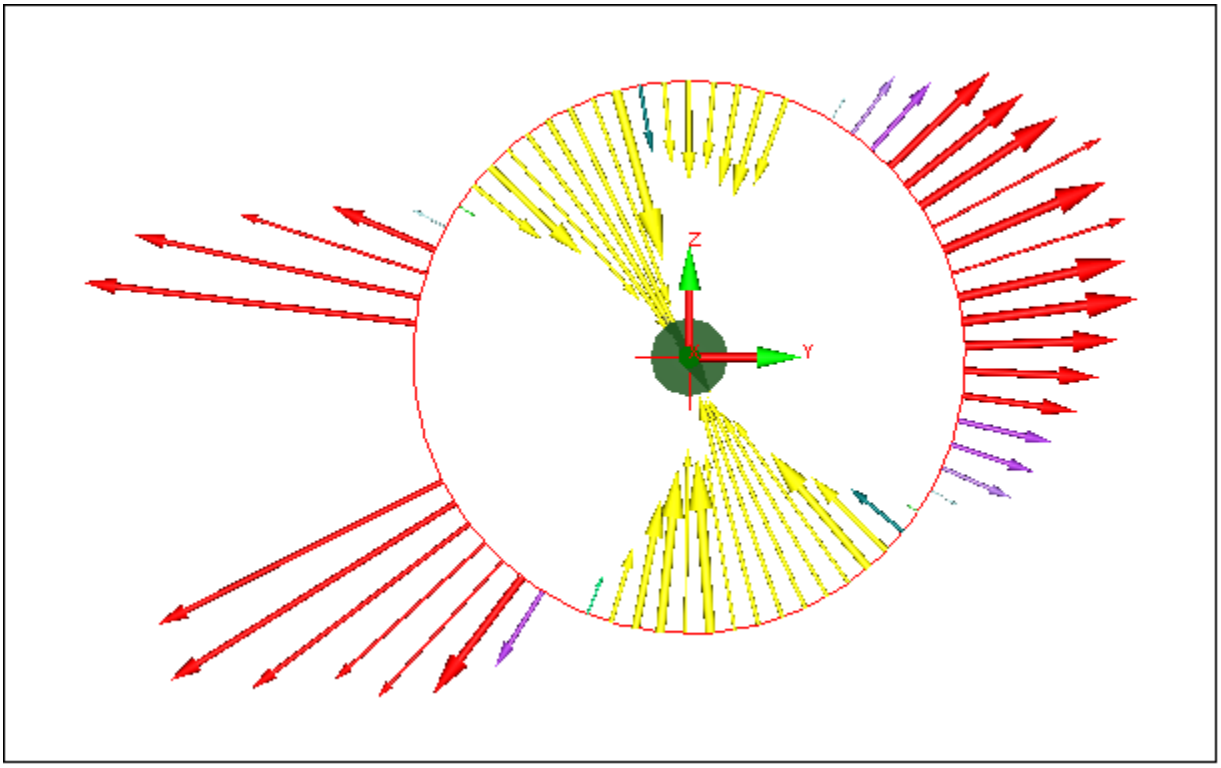
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.419	0.419	10.000	10.000	0.000
Y	0.000	0.000	0.000	0.000	0.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	78.000	77.960	-0.040	0.000	0.000	0.040
RN	0.000	0.231	0.231	0.050	0.000	0.181

BEAM TUBE ID 1 SKIPPING THE WELD


Z
Y

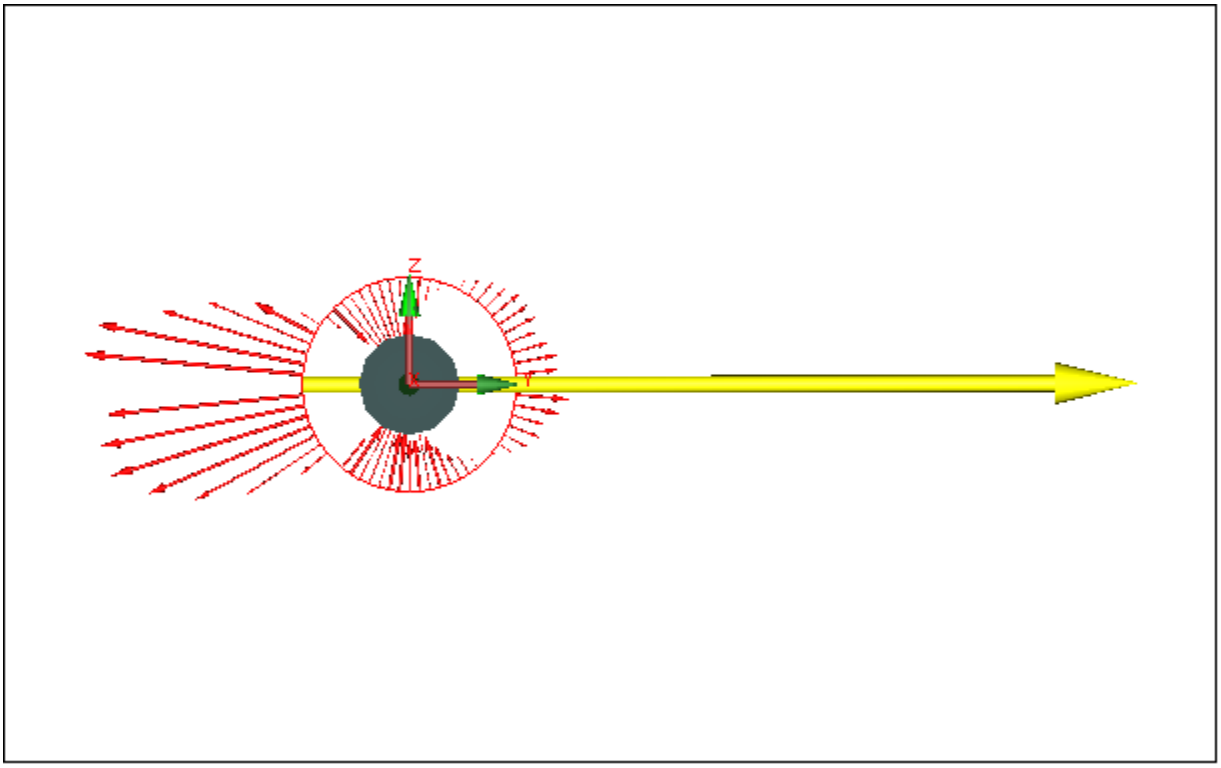
MM	DIM LOC14= LOCATION OF CIRCLE CIR BT ID2					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-193.000	-193.444	-0.444	10.000	10.000	0.000
Y	0.000	0.000	0.000	0.000	0.000	0.000
Z	0.000	0.000	0.000	0.000	0.000	0.000
D	78.000	78.023	0.023	0.050	0.000	0.000
RN	0.000	0.185	0.185	0.050	0.000	0.135

BEAM TUBE ID 2 SKIPPING THE WELD



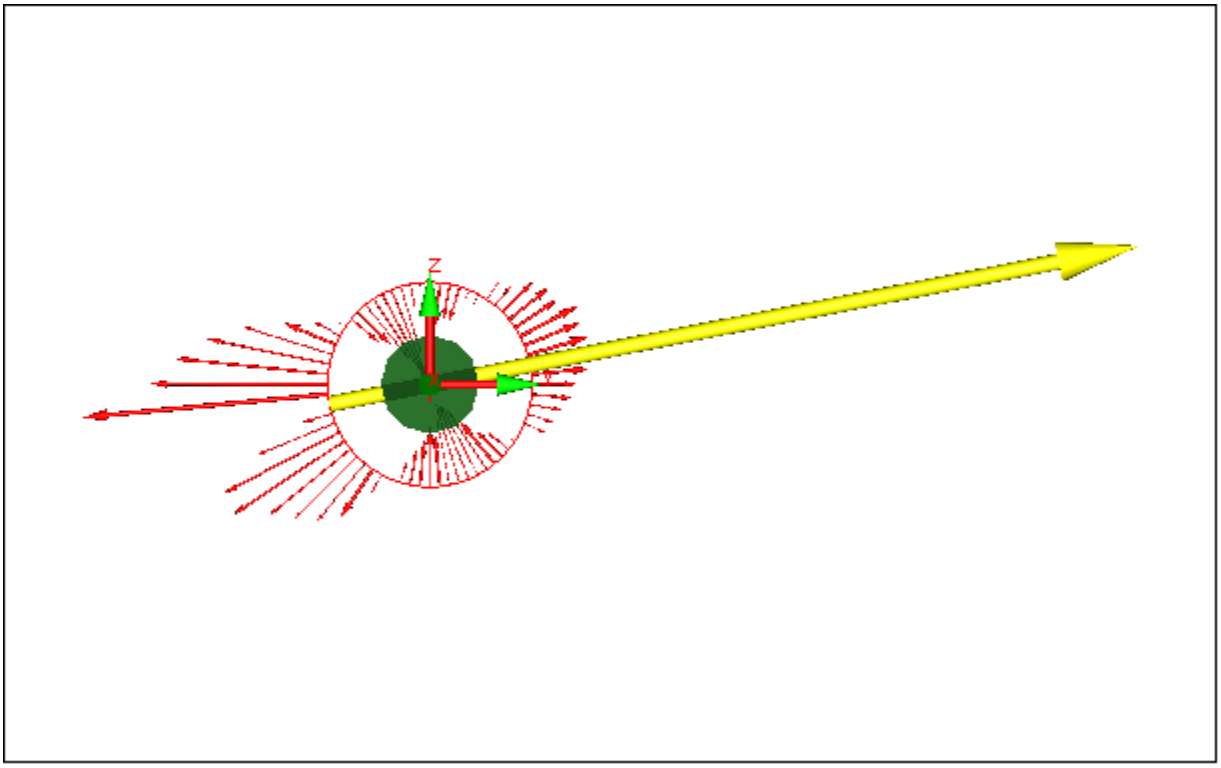
MM	DIM LOC29= LOCATION OF CIRCLE CIR BT ID1B					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.419	0.419	10.000	10.000	0.000
Y	0.000	0.012	0.012	0.000	0.000	0.012
Z	0.000	-0.002	-0.002	0.000	0.000	0.002
D	78.000	77.949	-0.051	0.050	0.000	0.051
RN	0.000	0.769	0.769	0.050	0.000	0.719

BEAM TUBE ID 1B WITH WELD



MM	DIM LOC30= LOCATION OF CIRCLE CIR BT ID2B					
AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-193.000	-193.444	-0.444	10.000	10.000	0.000
Y	0.000	0.008	0.008	0.000	0.000	0.008
Z	0.000	0.003	0.003	0.000	0.000	0.003
D	78.000	78.014	0.014	0.050	0.000	0.000
RN	0.000	0.817	0.817	0.050	0.000	0.767

BEAM TUBE ID 2B WITH WELD



MM DIM LOC15= LOCATION OF CIRCLE CIRC BC D1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	193.000	193.419	0.419	10.000	10.000	0.000
Y	0.000	0.030	0.030	0.150	0.150	0.000
Z	0.000	-0.022	-0.022	0.150	0.150	0.000
D	120.000	119.935	-0.065	0.150	0.150	0.000
RN	0.000	0.053	0.053	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	-193.444	-0.444	10.000	10.000	0.000
Y	0.000	0.007	0.007	0.150	0.150	0.000
Z	0.000	0.049	0.049	0.150	0.150	0.000
D	120.000	119.904	-0.096	0.150	0.150	0.000
RN	0.000	0.159	0.159	0.150	0.000	0.009

MM DIM LOC17= LOCATION OF CIRCLE CIRC HC1

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	4.500	4.502	0.002	1.000	1.000	0.000
Y	0.000	0.071	0.071	0.100	0.100	0.000
Z	0.000	0.176	0.176	0.100	0.100	0.076
D	210.300	211.311	1.010	0.050	0.000	0.960
RN	0.000	0.214	0.214	0.050	0.000	0.164

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	0.196	0.196	0.100	0.100	0.096
Z	0.000	0.135	0.135	0.100	0.100	0.035
D	210.300	211.248	0.947	0.050	0.000	0.897
RN	0.000	0.278	0.278	0.050	0.000	0.228

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	0.028	0.027	0.100	0.100	0.000
Z	0.000	0.054	0.054	0.100	0.100	0.000
D	81.500	83.306	1.806	0.100	0.050	1.706
RN	0.000	0.254	0.254	0.150	0.000	0.104

MM DIM LOC20= LOCATION OF CIRCLE CIRC BTOD2

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
X	-57.000	-60.998	-3.998	1.000	1.000	2.998
Y	0.000	-0.040	-0.040	0.100	0.100	0.000
Z	0.000	0.067	0.067	0.100	0.100	0.000
D	81.500	83.311	1.811	0.100	0.050	1.711
RN	0.000	0.367	0.367	0.150	0.000	0.217

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

AX	NOMINAL	MEAS	DEV
A	0.000	4.037	4.037

MM	DIM LOC21= LOCATION OF LINE LINC OFFSET1		
AX	NOMINAL	MEAS	DEV
V	0.00031	0.00000	1.00000

MM	DIM LOC22= LOCATION OF LINE LINC OFFSET2		
AX	NOMINAL	MEAS	DEV
V	0.00031	-0.07040	0.99752

MM DIM LOC25= LOCATION OF CIRCLE CIR F1 SS ID

AX	NOMINAL	MEAS	DEV	+TOL	-TOL	OUTTOL
D	109.200	109.159	-0.041	0.200	0.000	0.041
RN	0.000	0.044	0.044	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	109.065	-0.135	0.200	0.000	0.135
RN	0.000	0.071	0.071	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	-112.638	-0.638	0.500	0.500	0.138
FL	0.000	0.012	0.012	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	-112.677	-0.677	0.500	0.500	0.177
FL	0.000	0.022	0.022	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	112.620	0.620	0.500	0.500	0.120
FL	0.000	0.025	0.025	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	112.720	0.720	0.500	0.500	0.220
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	0.117	0.117	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	0.073	0.073	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	0.154	0.154	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	0.167	0.167	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	83.810	-0.190	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	83.771	-0.229	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	83.827	-0.173	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	83.727	-0.273	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-01 DWG= SN=
TOTAL # OF MEAS =0 # OUT OF TOL =0