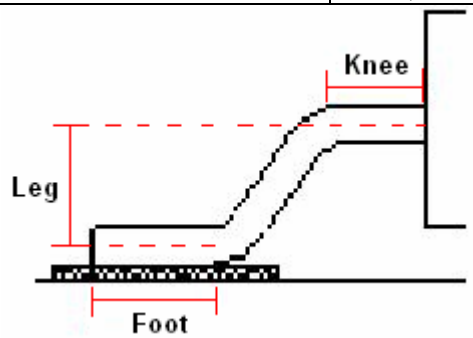
Package: TQFP-144 SAC 305

Feature	Value [mm] (in)
Package length Fig 7	20 (0.7874)
Package width	20 (0.7874)
Package thickness Fig 7	1.027 (0.0411)
Pitch Fig 5	0.5092 (0.0200)
Mass	1.0 g
CTE Strain Gauge Technique Temp range -50°C to 100°C Linear Correlation	6.957 ppm/°C (X - axis) 6.412 ppm/°C (Y- axis)
Die length Fig 8	5.138 (0.2023)
Die width	N/A
Die thickness Fig 8	0.2073 (0.0082)
Lead width Fig 5	0.2012 (0.0079)
Lead thickness Fig 7	0.126 (0.0049)
Minimum Termination gap Fig 5	0.3079 (0.0121)
	
Lead foot length Fig 6	0.385 (0.0152)
Lead leg length Fig 6	0.542 (0.0213)
Lead knee length Fig 6	0.298 (0.0117)

Feature	Value
Lead/Termination Base Metal Alloy	Cu Base Fig 11
Lead/Termination Metallization / thickness	SAC 305 27.1 [µm] Fig 9,10 (0.001067)
Plating 1 metallization / thickness	N/A
Plating 2 metallization / thickness	N/A
Plating 3 metallization / thickness	N/A
Over-plate to protect during cross section?	No
Diameter of solder balls	N/A
Solder ball alloy (SEM or XRF estimate)	N/A
Width of solder ball in contact w/ component pad	N/A
Width of component pad	N/A
Thickness of component pad	N/A
Diameter of solder mask opening	N/A

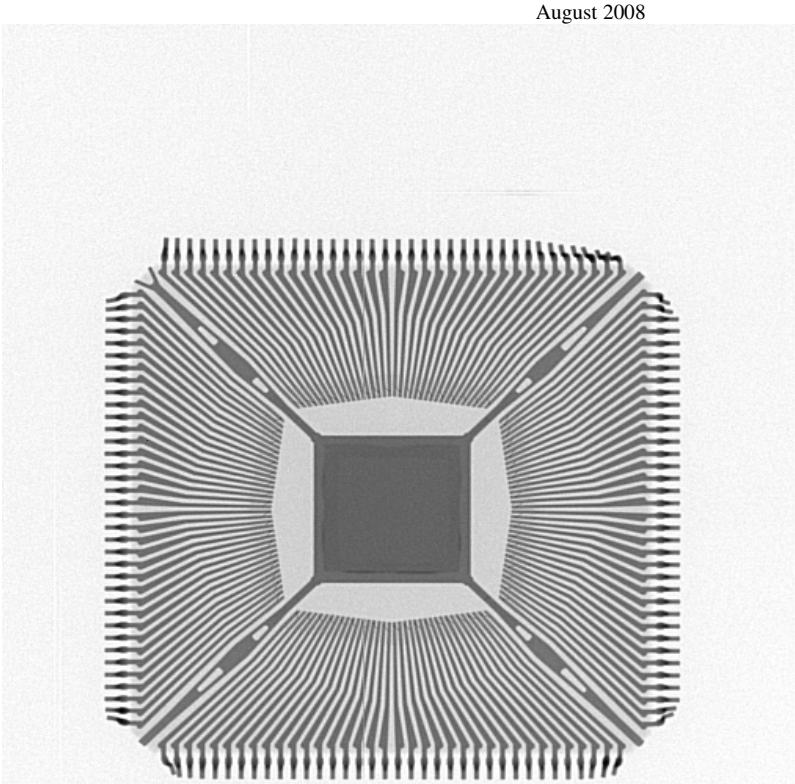


Fig.No.1 TQFP-144SAC 305, X-ray, View Z

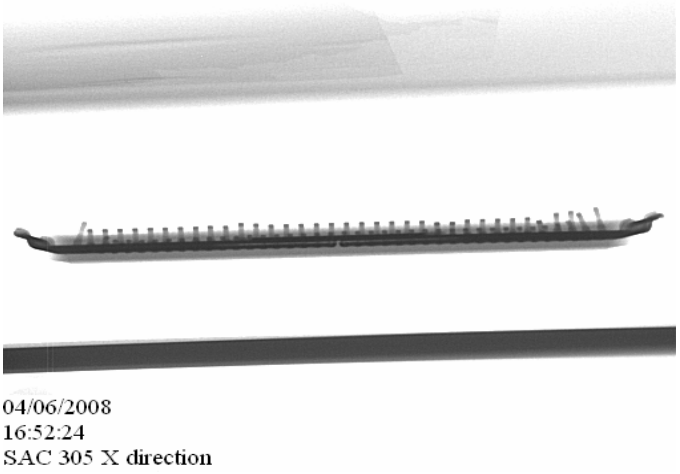


Fig.No.2 TQFP-144 SAC 305, X-ray, X-axis View

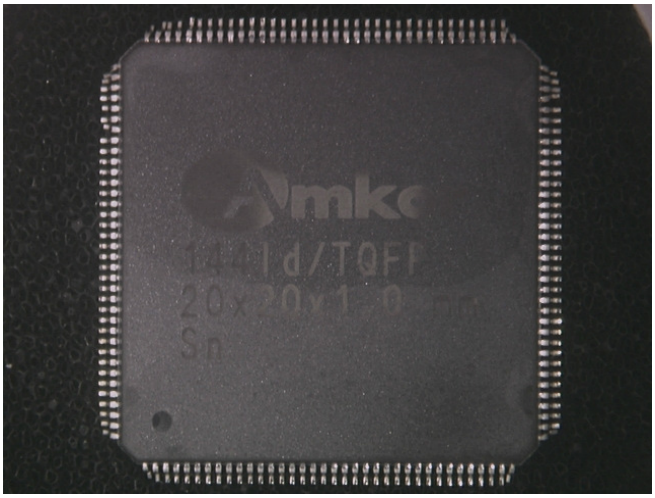


Fig.No. 3 TQFP-144 SAC 305, Front View M~4X

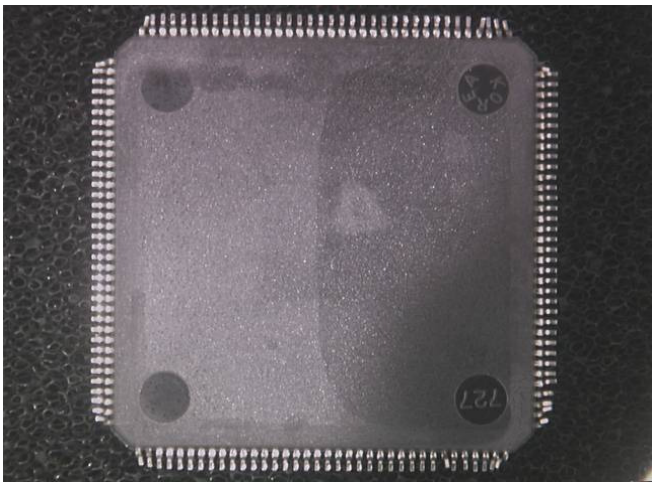


Fig.No. 4 TQFP-144 SAC 305, Back View M~4X

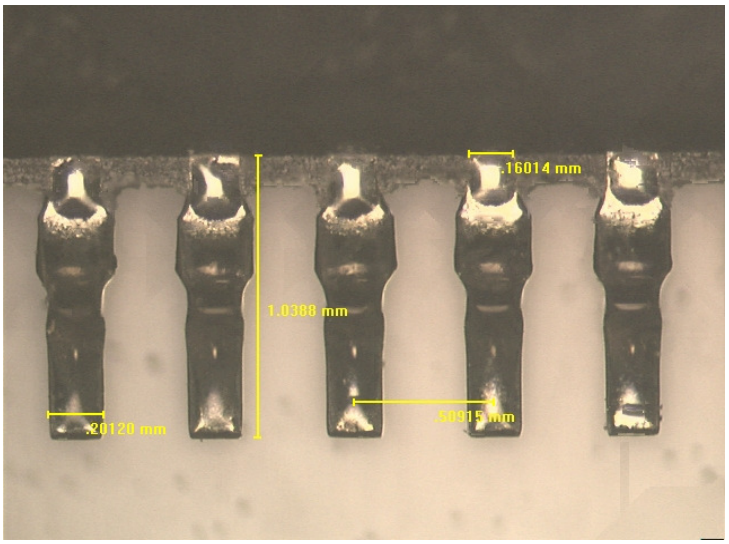


Fig No. 5 TQFP-144 SAC 305 Leads Dimensions M~64X

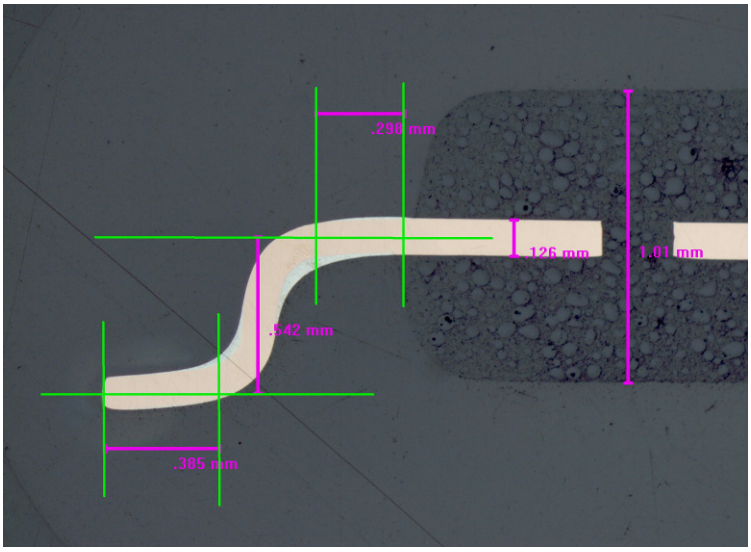


Fig No. 6 TQFP-144 SAC 305 Leads Dimensions Lead Cross Section Knee, Foot, M~68X

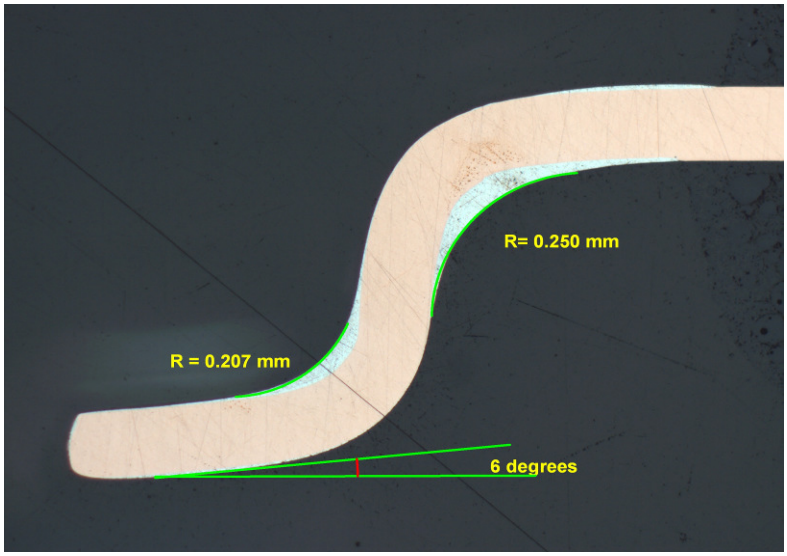


Fig No. 7 TQFP-144 SAC 305 Radii
Leg M~136X

Fig No. 7 TQFP-144 SAC 305 Component Over all M~8X

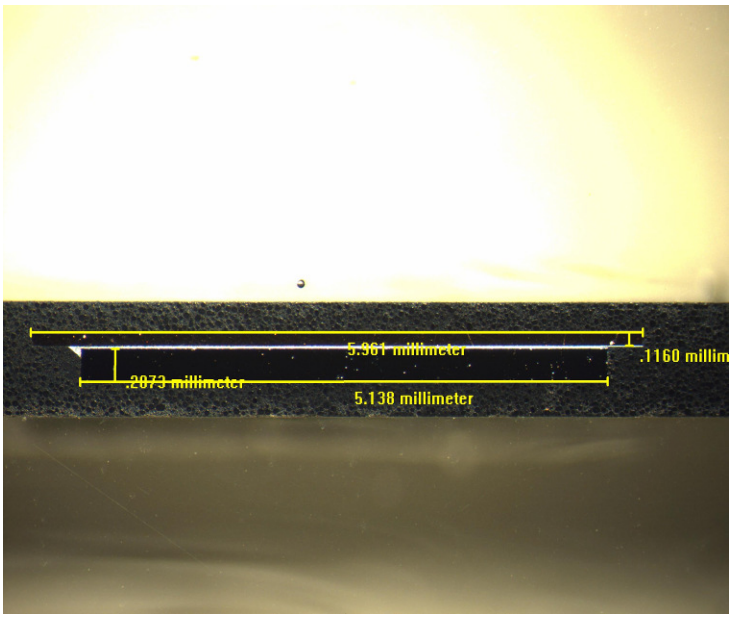


Fig No. 8 TQFP-144 SAC 305 Die Measurement M~24X

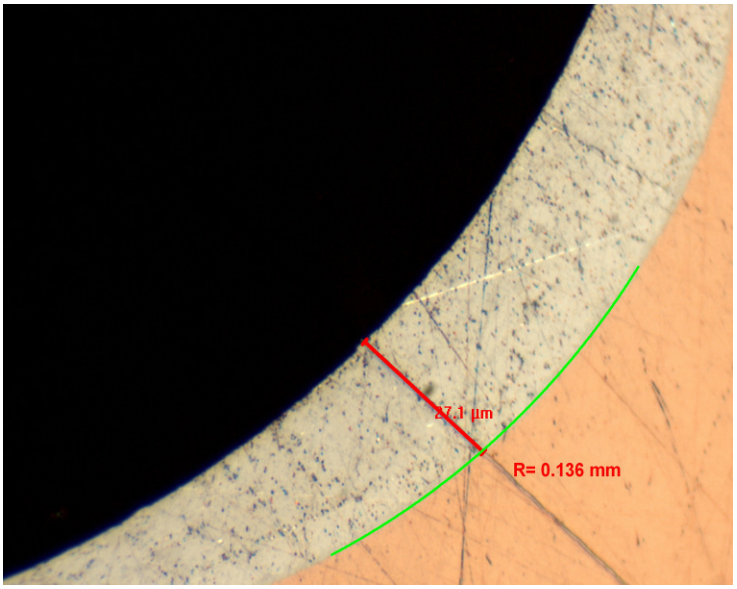
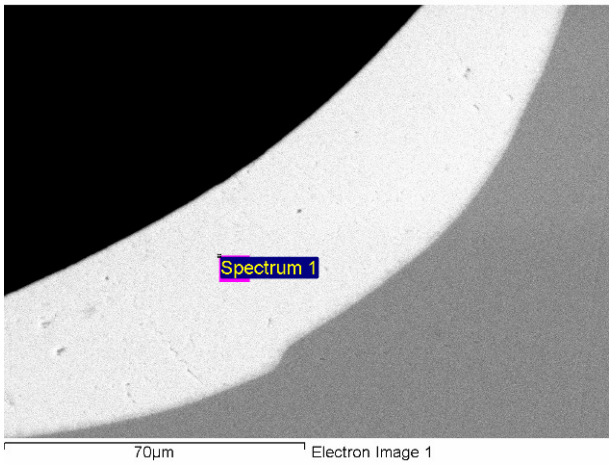
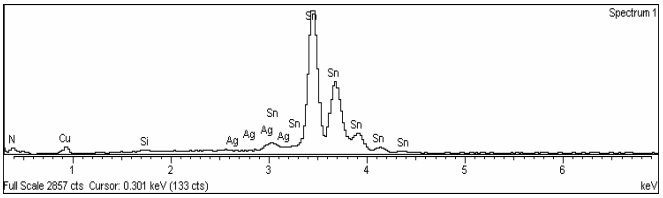


Fig No. 9 TQFP-144 SAC 305 Lead Plating Measurement M~1344X





Element	App	Intensity	Weight%	Weight%	Atomic%
	Conc.	Corrn.		Sigma	
C K	22.94	0.9630	9.46	1.04	43.54
N K	2.47	0.2975	3.30	3.67	13.02
Si K	0.77	0.5215	0.59	0.19	1.16
Cu K	10.46	0.9249	4.49	0.37	3.91
Ag L	4.59	0.9635	1.89	0.38	0.97
Sn L	194.00	0.9594	80.28	3.20	37.41
Totals			100.00		

Fig No. 10 TQFP-144 SAC 305, Lead Metallization Material

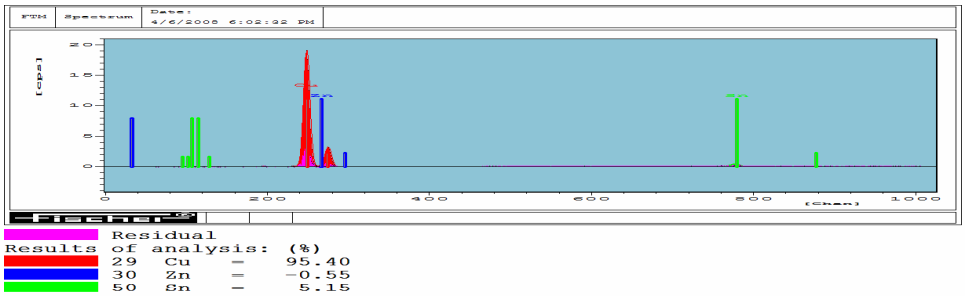


Fig No. 11 TQFP-144 SAC 305 Leads Material by XRF