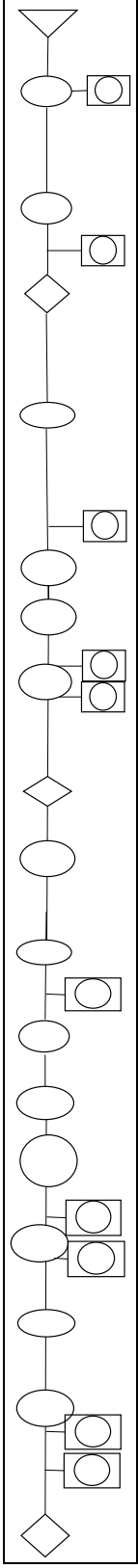
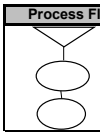
QFP/SOP/SOT/SSOP/TO Assembly Generic QC Flow & Control Plan

Process Flow	Operation	Function	Frequency	Sample size
	Incoming Wafer Inspection	Visual check for broken wafer	Every wafer	Whole area of wafer back
		wafer backside check for crack and scratch	Every wafer	5 wafer
		Inspection for die defect	Every wafer	75ea/5 wafers; 9points per wafer
	Backgrinding	Backgrind thickness	Every setup	5 data. 1 wafer
		Wafer backside roughness measure	1x/shift/machine	1 pcs wafer
		TTV	Every setup	1 pcs wafer
	Wafer saw	Visual check	1x/shift/every change device	50 units
		Saw Line	Between 5th to 15th line in wafer	Every wafer
	2/0 QC Gate	Visual defects	Every wafer lot	125 dies
	Die Attach	Visual inspection	Every set-up	2ea
		Die backside inspection	Every setup, Every 8 hrs / MC	5ea, (2ea monitor)
		Die tilt	Every setup, Every 8 hrs / MC	2ea
		Fillet height	Every setup, Every 8 hrs / MC	2ea
		Epoxy coverage	Every setup, Every 8 hrs / MC	2ea
		Die backside chip measurement	Every setup	2ea
		Die placement	Every setup, Every 8 hrs / MC	2ea
		Epoxy void	Every setup, Every 12 hrs / MC	2ea, size < 100 units 10% lot size; >100 units 10 good dice
		Bondline thickness	Every setup, Every 8 hrs / MC	2ea
	Die Attach Cure	Die shear	per oven/12hours	2ea
		Epoxy void	Per day/mc	1 strip
	Plasma clean	Contact angle measurement on die surface	1x / 1day / machine	3ea
	Wire Bond	Wire pull test	1x/shift/machine	10 wires
		Ball shear test	1x/shift/machine	10 balls
		Cratering	Every setup	1 ea
	3/0 QC Gate	Visual inspection	Per lot	125ea: Lot size ≤ 3200,
				200ea: 3200 < Lot size ≤ 10000
				315ea: 10000 < Lot size ≤ 35000
				500ea: Lot size > 35000
	Plasma clean	Contact angle measurement on die surface	1x / 1day / machine	Every machine
	Mold	Visual inspection	Every setup	1st good shot
		warpage	Every mold die set-up	1st good shot, 2unit/strip
		Package thickness	Every mold die set-up 1X/mold die/MC/shift	1st good shot,1unit/strip 1X/mold die/MC/shift （monitor ）
		leadframe off centering	Every mold die set-up, 1x/day/machine (for the day w/o setup buyoff)	5 unit in 1 shot
	Post mold cure	Temperature / time	3 oven/1shift	Nil
		Warpage	Per pkg type/size/day	2 units
		Delamination	3 ovens/ shift	1 strip/Oven
	Trim	Visual defects	After each change of trim die set/ PM & machine repaired; at least once per shift for machines that did not undergone setup buy-off (monitor)	the first strip,
		Micro defects		3 units/strip, 1 strips; 1 unit (monitor)
		dambar instrusion/protrusion	After each change of trim die set/ PM & machine repaired.	5 units/strip,1 strip
	Debleed	visual inspection	1x / shift / Machine	5 strips
	Plating	visual inspection	After equipment repair or PM,each time 3 strips. 3 kinds of pkg size, 3 lots/shift, each time 3 strips. When machine idle,At least 1 lots/shift do buyoff, each time 3 strips.	3 strips
		composition		3 strips , 12 readings
		plating thickness		3 strips , 12 readings
		solderability test	Per day/bathe	5 units
		ion contamination	Per bath / week	3 strips
	Laser marking	Visual inspection	Every setup; 1X/Shift/Machine	First strip; 1 strips
		Engraving depth	Every setup	5 points of 1st strip
	Form	visual inspection	After each change of form die set/die set cleaning/PM & machine repaired; 1x/shift/machine	5 units; 1 tray
		micro defects		5 units
		co-planarity		5 units
		dimension check	After each change of form die set/die set cleaning/PM & machine repaired;	5 units
		External width,Stand off	1x/shift/machine	5 units
	Final visual QC Gate	Visual defects	Per sub-lot	AQL 0.04
		Side defects visual inspection	Per sub-lot	10 units
		Reject verification	Per sub-lot	5 units

Test Generic QC Flow & Control Plan

Process Flow	Process	Function	Frequency	Sample size
	Electrical Test	EQA buyoff	Every lot	per AQL sampling plan, min 0.065
	OQA	Visual defects	Every lot	315units/lot
	Pack	Document, label	Every lot	