

Attachment B3
Positive Control Log Matrix for Tray Based Machine

POSITIVE CONTROL LOG MATRIX FOR TRAY BASED MACHINE											Revision 2		
INPUT VARIABLE						PLATFORM (TRAY BASED MACHINE)							
Item	Category	Subcategory	Vision System/ MC Feature-Part/ Item	Control Item	Frequency	HEXA	HEXA (AMS)	HEXA (BGA - Mirror Type Only)	MV996	VITROX (TR1K, TR2K, TR3K)	VITROX (TR1K, TR2K, TR3K) - ADCV Lots		
1	Mark	Mark Score (Laser)	In-tray	Acceptance Score	Every set-up	80%	80%	60%	30%	50% - 70%	50% - 70%		
				Rejection Score	Every set-up	70%	60%	40%	30%	N/A	N/A		
			In-pocket	Acceptance Score	Every set-up	80%	80%	60%	30%	40% - 60%	40% - 60%		
				Rejection Score	Every set-up	70%	60%	40%	30%	N/A	N/A		
		CML Mark Parameter Symbol Set 1		Rejection score (Gross Check)	Every set-up	65%	N/A	N/A	N/A	N/A	N/A		
		CML Mark Parameter Symbol Set 2 (For 32 QFN 5X5X0.4 Only)		Rejection score (Gross Check)	Every set-up	10%	N/A	N/A	N/A	N/A	N/A		
		Verification criteria / Mismatch	In-tray	Missing Area	Every set-up	4 pixel	4 pixel	4 pixel	N/A	N/A	N/A		
			In-pocket	Missing Area	Every set-up	4 pixel	4 pixel	4 pixel	N/A	N/A	N/A		
			In-tray/ In-pocket	Overprint (OP) / Underprint (UP)	Every set-up	N/A	N/A	N/A	N/A	5%	5%		
		Shifting Tolerance (mils/pixel)	In-tray/ In-pocket	X & Y	Every set-up	20 pixels/%	20 pixels/%	20 pixels/%	N/A	20 mils	20 mils		
2	Orientation	Chamfer	In-tray/ In-pocket	Gray/ Acceptance Score	Every set-up	80%	80%	80%	N/A	N/A	N/A		
		Notch / Dimple	In-tray	Gray/ Acceptance Score	Every set-up	60%	60%	60%	N/A	N/A	N/A		
		CML Orientation		Reject score	Every set-up	N/A	N/A	N/A	N/A	N/A	N/A		
		Dimple / Notch (Pattern Matching)	In-tray/ In-pocket	Pin1 Pass score	Every set-up	N/A	N/A	N/A	N/A	50% - 70%	50% - 70%		
		Unit Orientation at Tape			Every set-up	C1,C2,C4,C3,M1	C1,C2,C4,C3,M1	C1,C2,C4,C3,M1	C1,C2,C4,C3,M1	C1,C2,C4,C3,M1	C1,C2,C4,C3,M1		
3	Taping Assembly	Pick and Place	Drop of Height		Every set-up	0.5-1.0 mm	0.5-1.0 mm	0.5-1.0 mm	N/A	N/A	N/A		
			Drop Delay		Every set-up	20-200 ms.	20-200 ms.	20-200 ms.	N/A	<100 ms.	<100 ms.		
4	Learn Feature Accessibility				Every set-up	N/A	N/A	N/A	N/A	No Access	No Access		
5	Sealing Assembly	Sealing Temperature			Start of the shift & Every set-up	180-220 °C	180-220 °C	180-220 °C	150°C	180°C-220 °C	160°C-220 °C		
		Sealing Pressure			Start of the shift & Every set-up	50-90 / 3.4-6.2 (Psi/bar)	50-90 / 3.4-6.2 (Psi/bar)	50-90 / 3.4-6.2 (Psi/bar)	49.3 psi	50-90 / 3.4-6.2 (Psi/bar)	50-90 / 3.4-6.2 (Psi/bar)		
		Sealing Time			Start of the shift & Every set-up	80 - 500 ms	80 - 500 ms	80 - 500 ms	N/A	80 - 500 ms	50 - 100 ms		
6	Purge	Purge Parameter		Start of the shift & Every set-up	0.3-0.8 bar	0.3-0.8 bar	0.3-0.8 bar	N/A	<0.03 MPa	<0.03 MPa			

Spec. No. TFP16-003 Rev. KY

