

DRAWINGS

Fig. 1

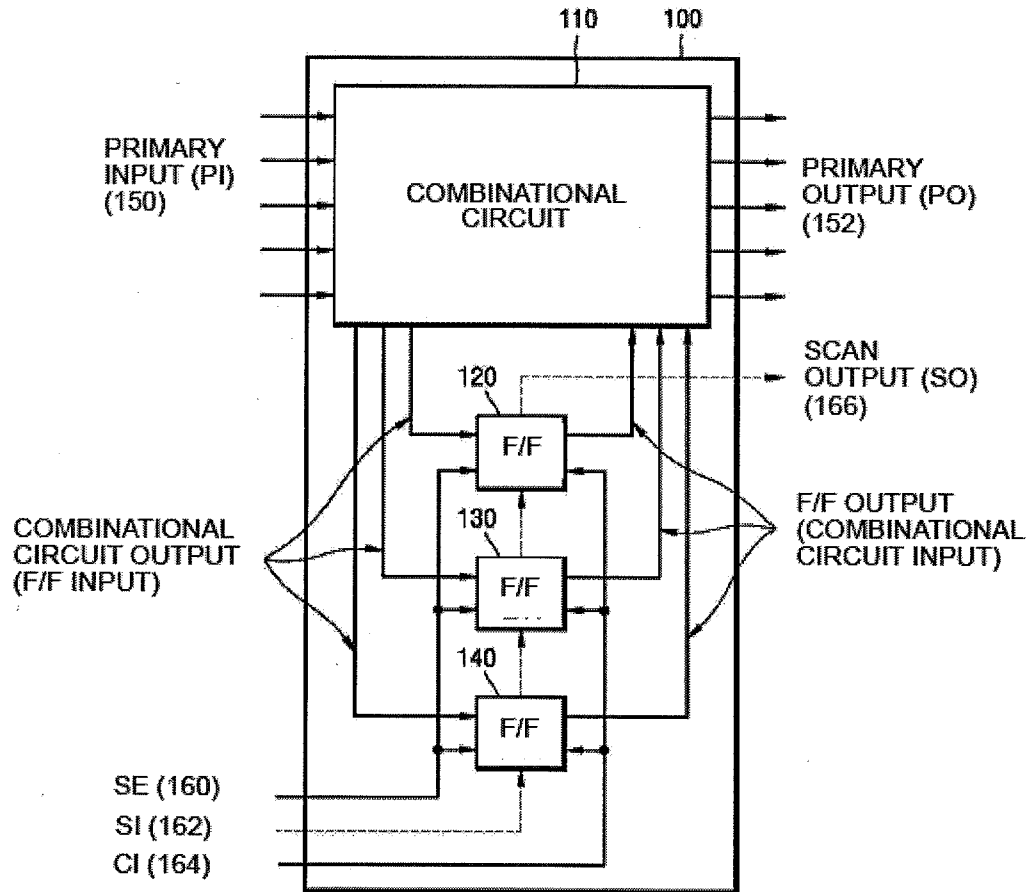


Fig. 2

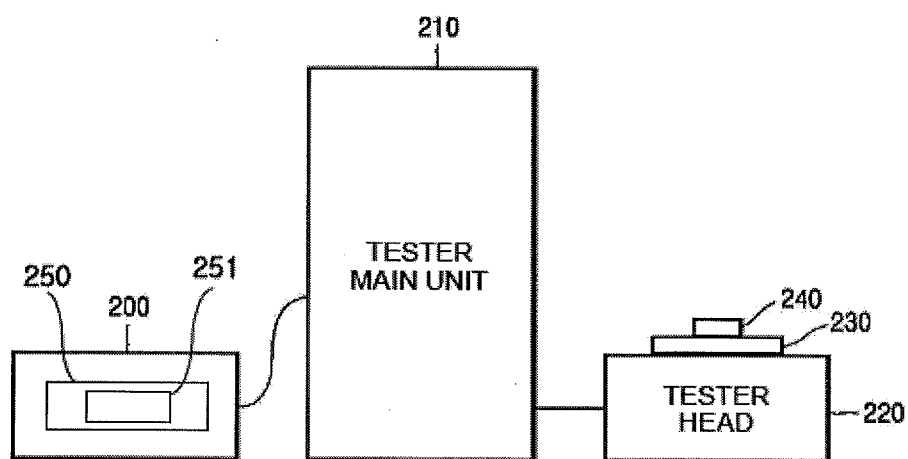


Fig. 3

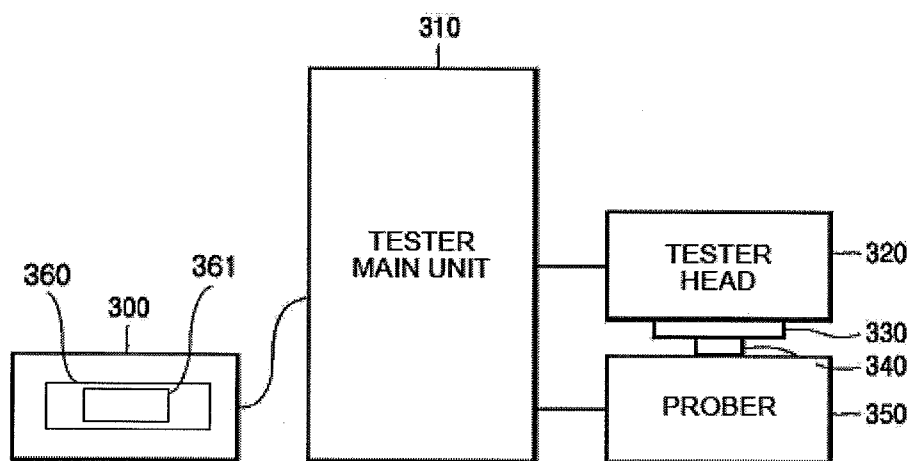


Fig. 4

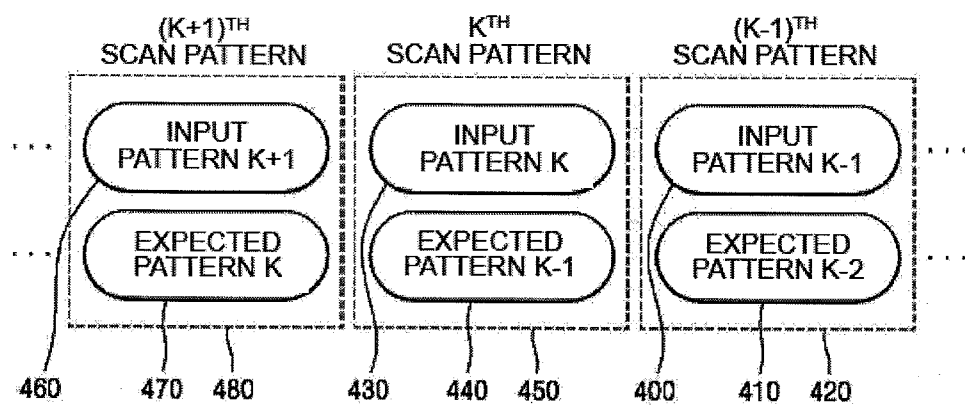


Fig. 5

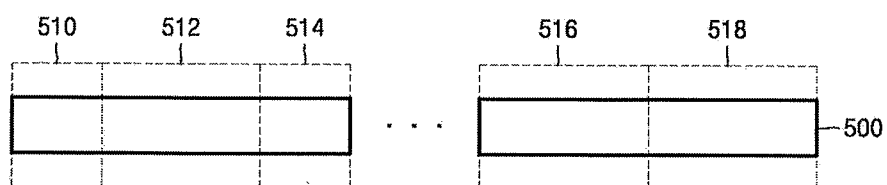


Fig. 6

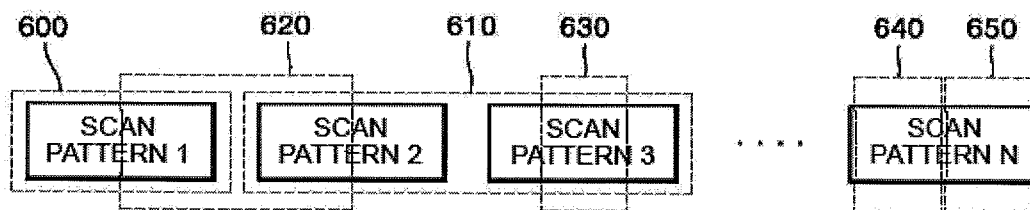


Fig. 7

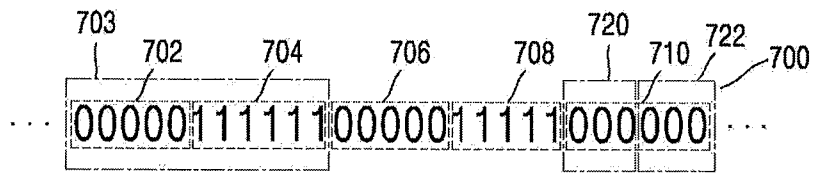


Fig. 8

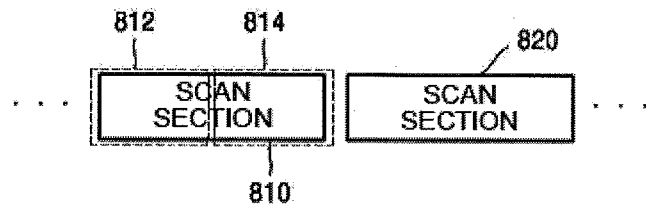


Fig. 9

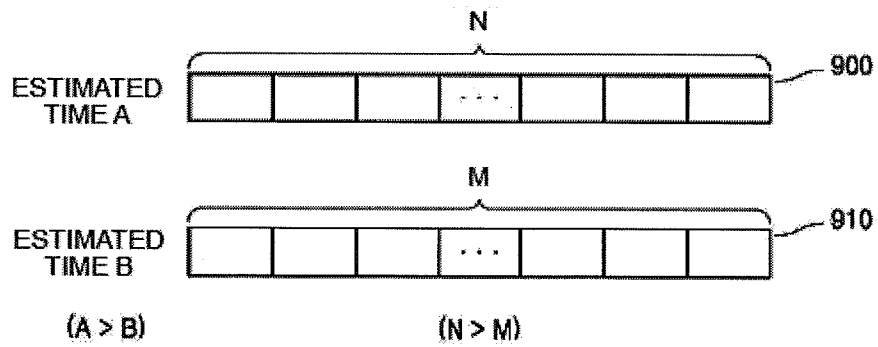


Fig. 10

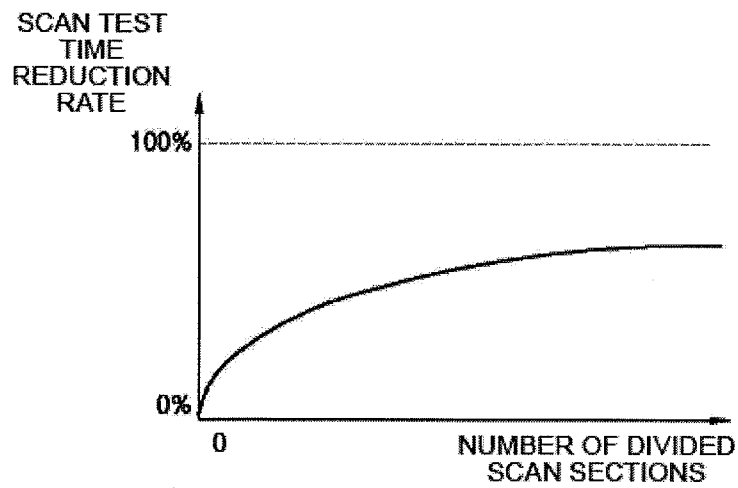


Fig. 11

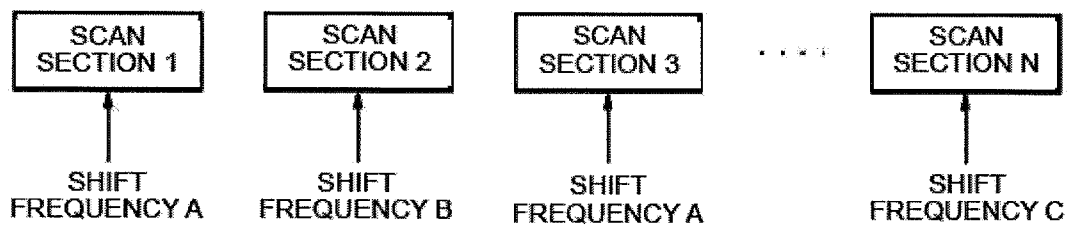


Fig. 12

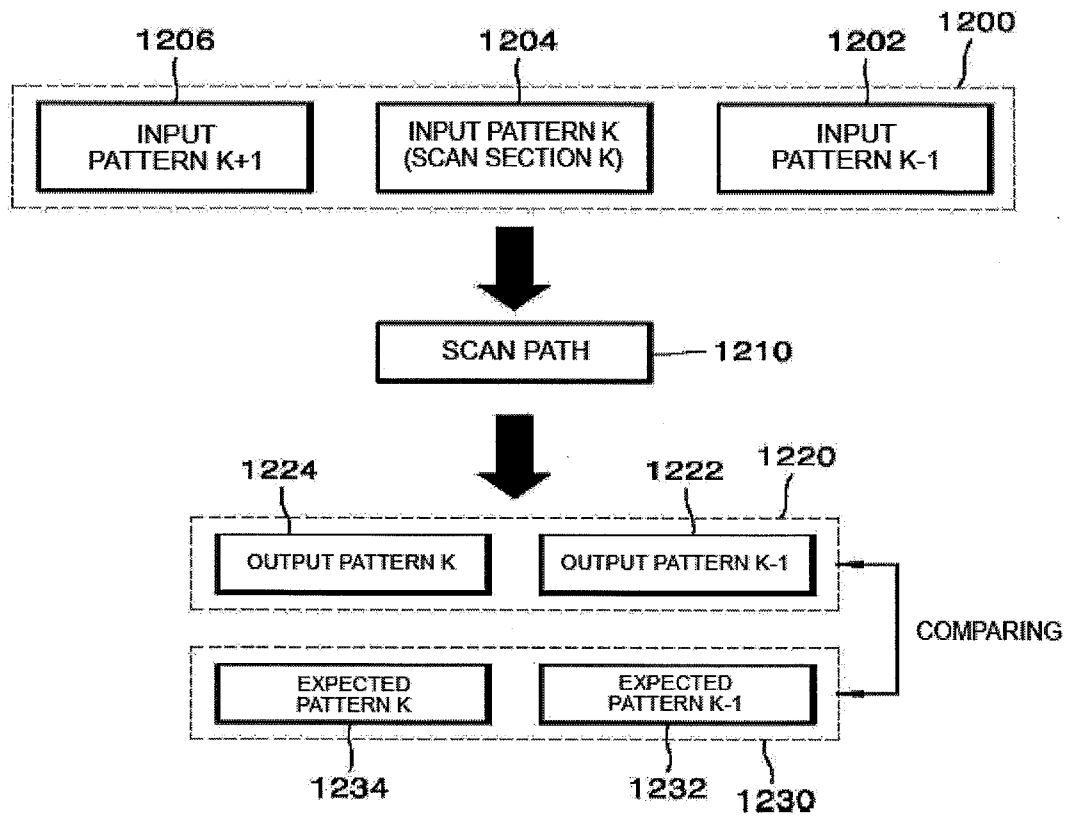


Fig. 13

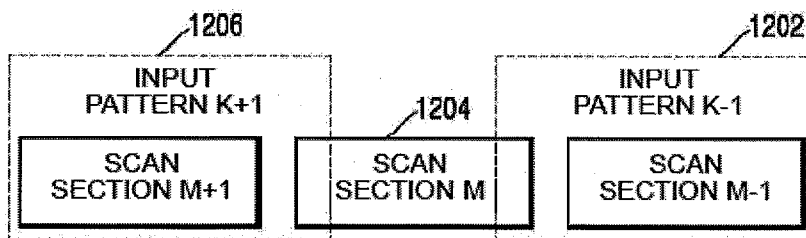


Fig. 14

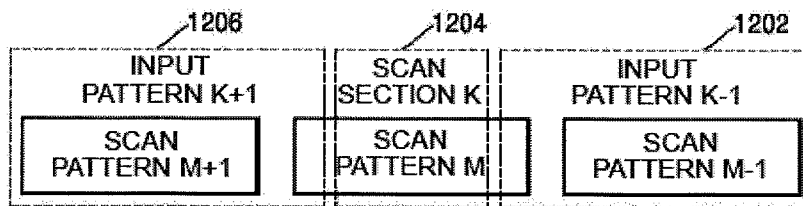


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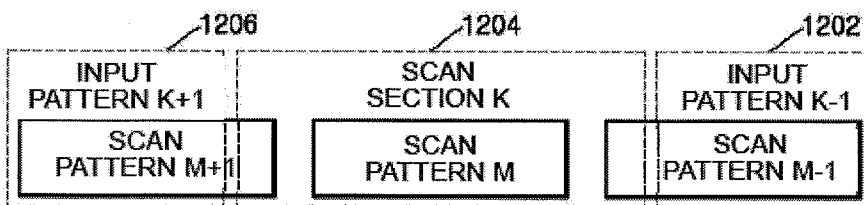


Fig. 16

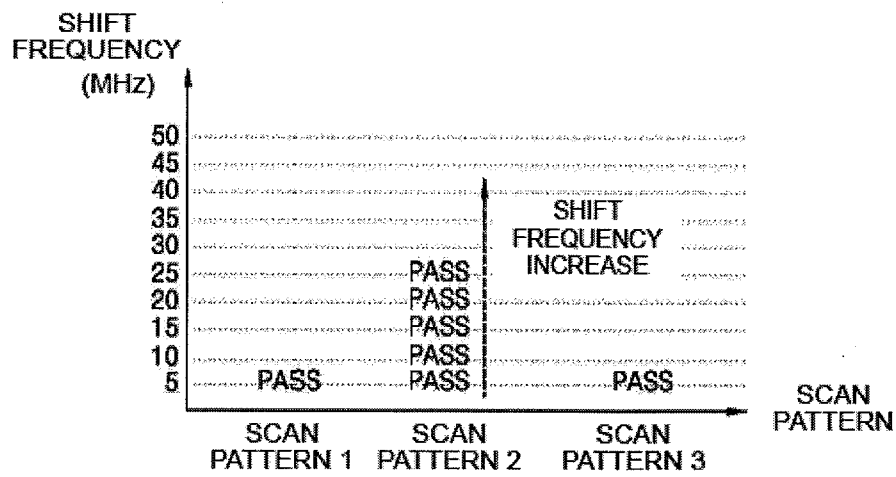


Fig. 17

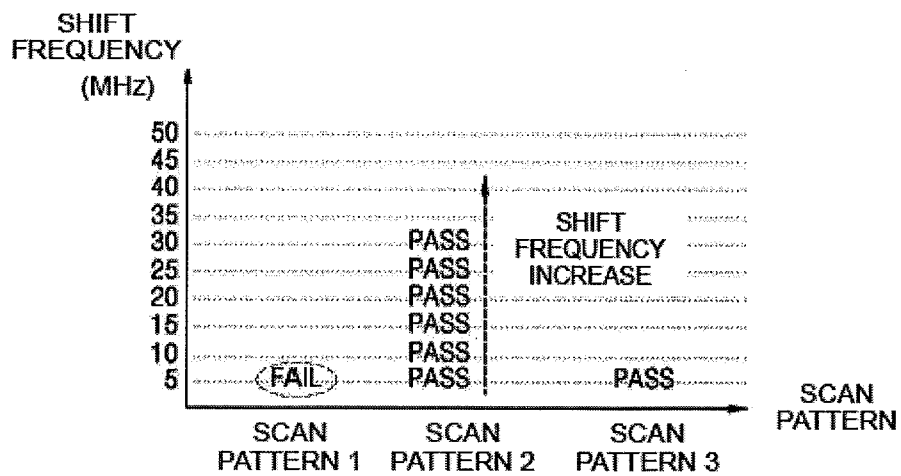


Fig. 18

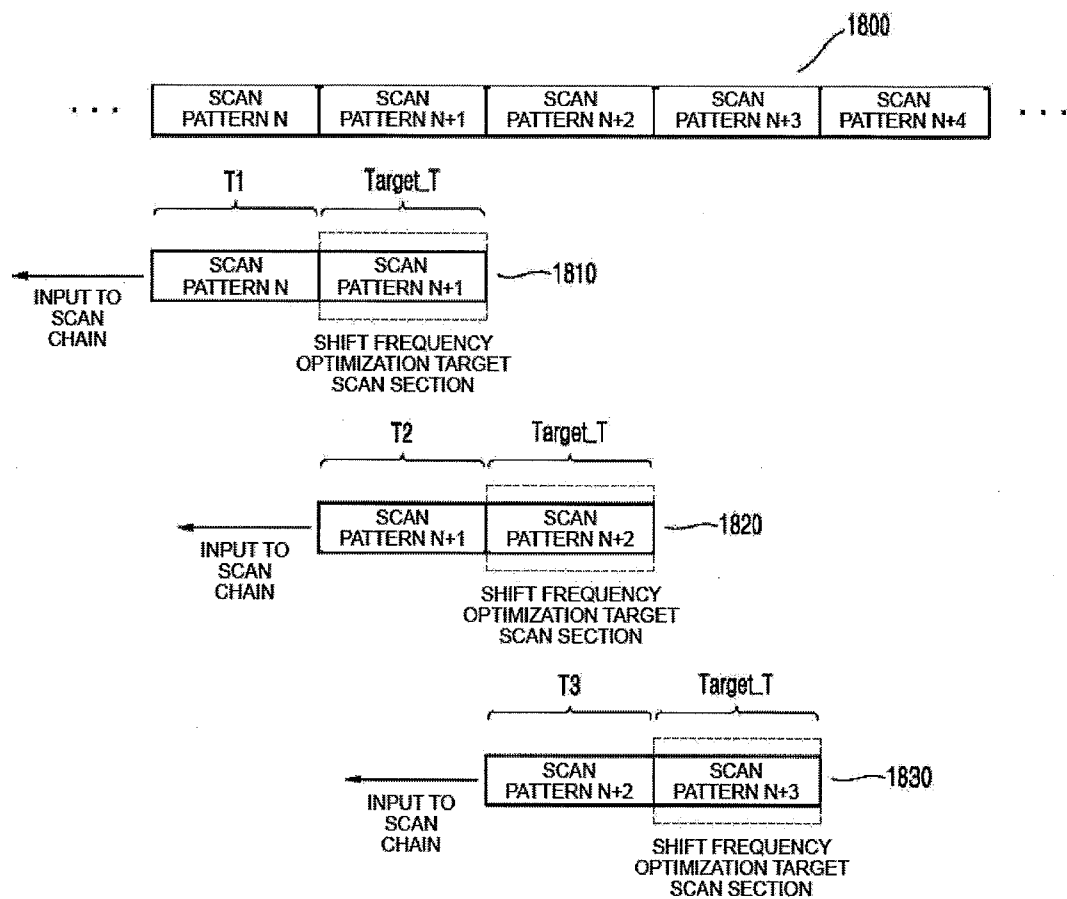


Fig. 19

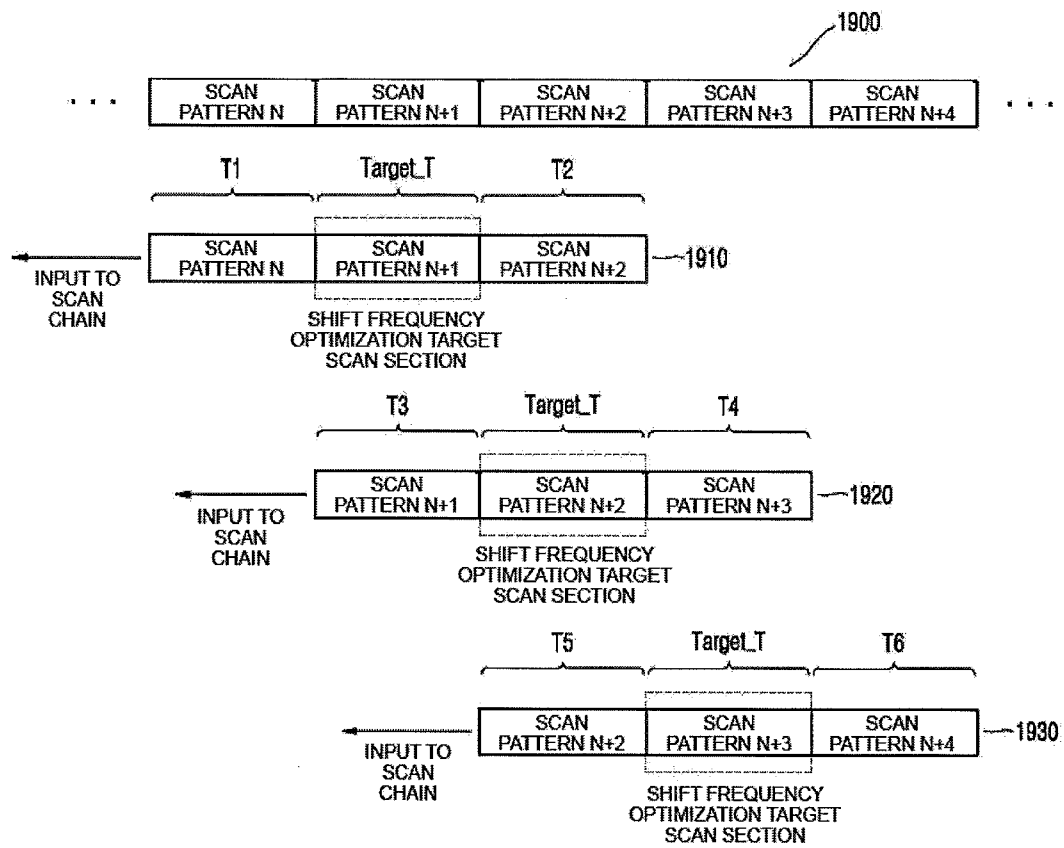


Fig. 20

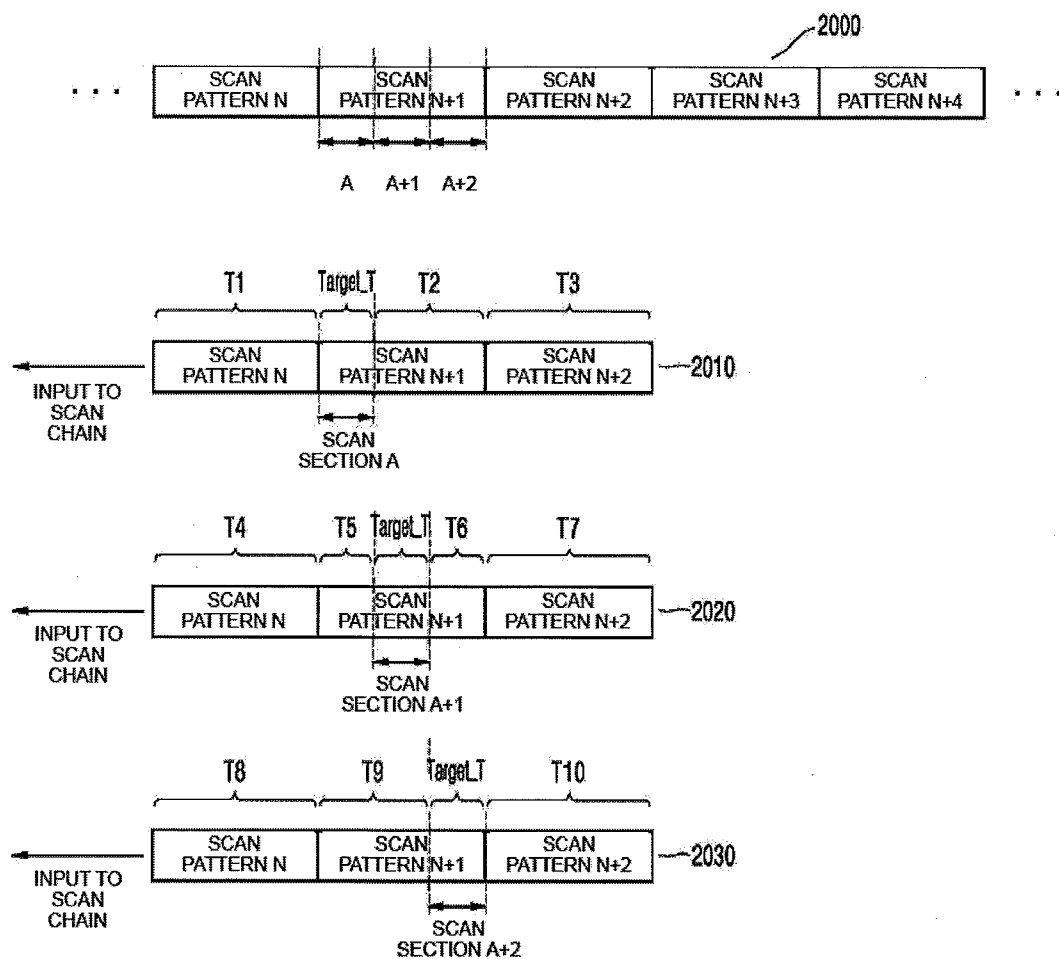


Fig. 21

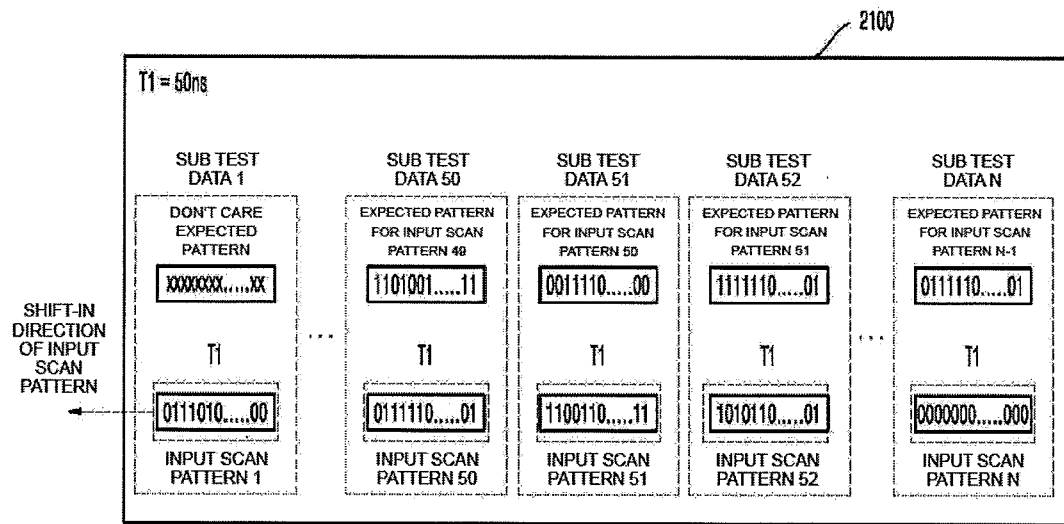


Fig. 22

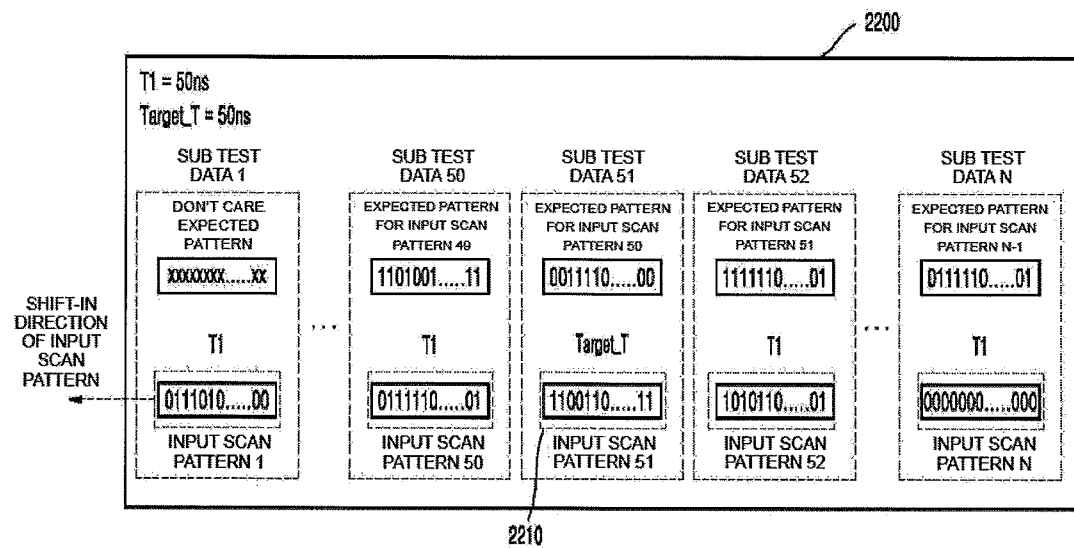


Fig. 23

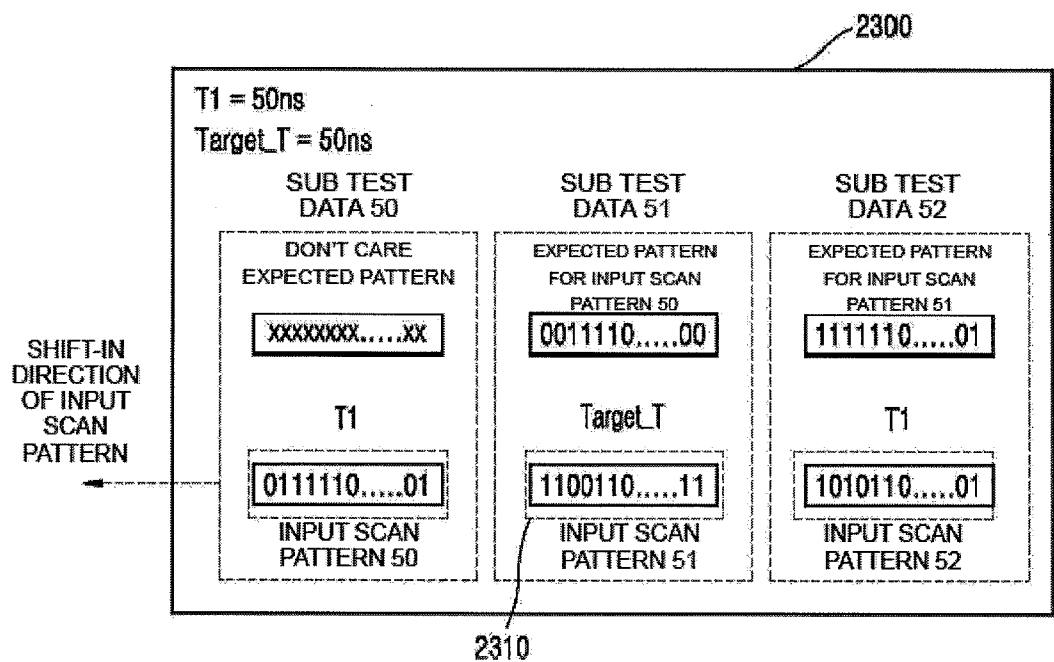


Fig. 24

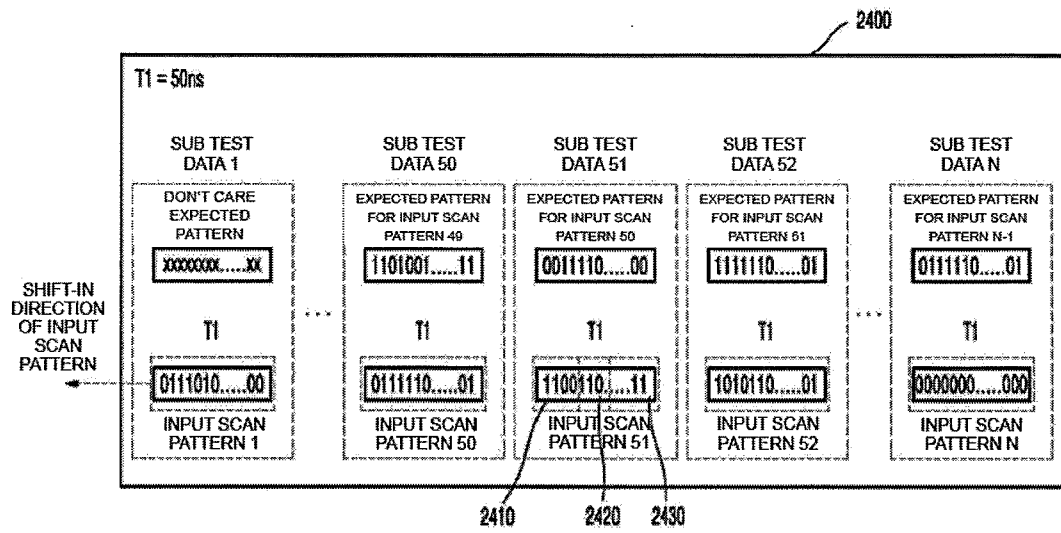


Fig. 25

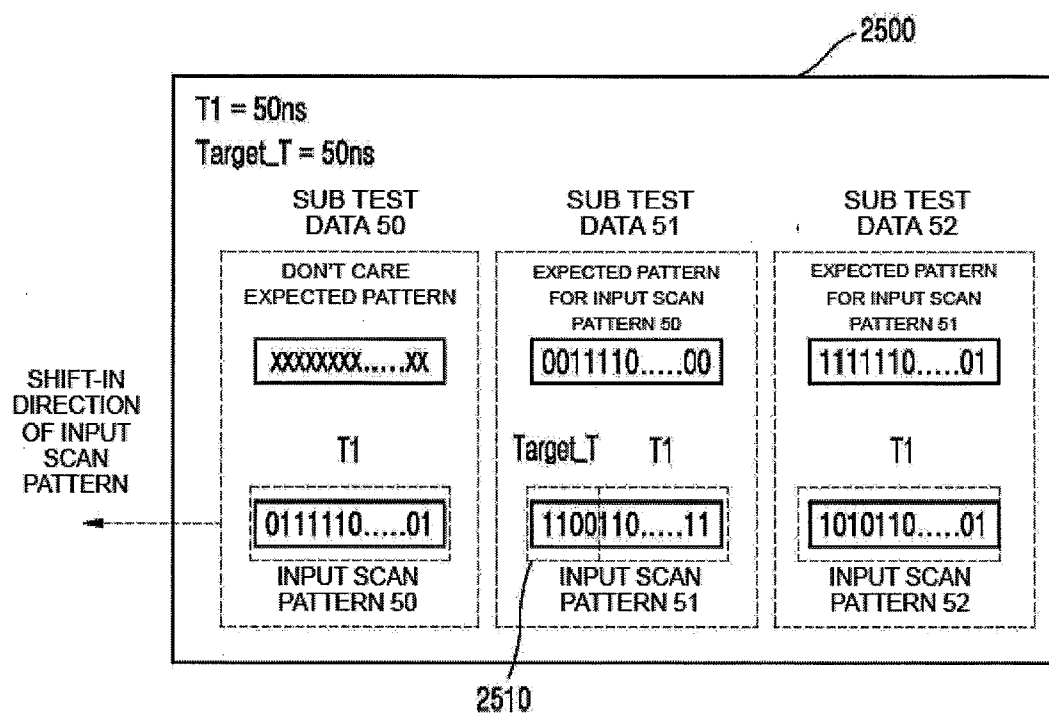


Fig. 26

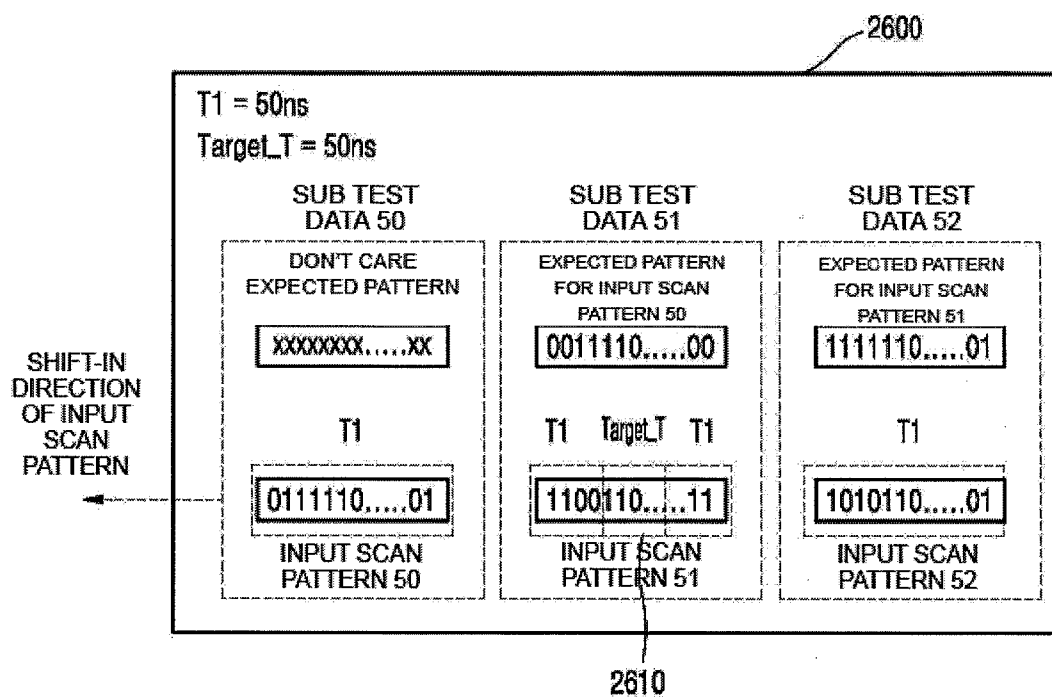


Fig. 27

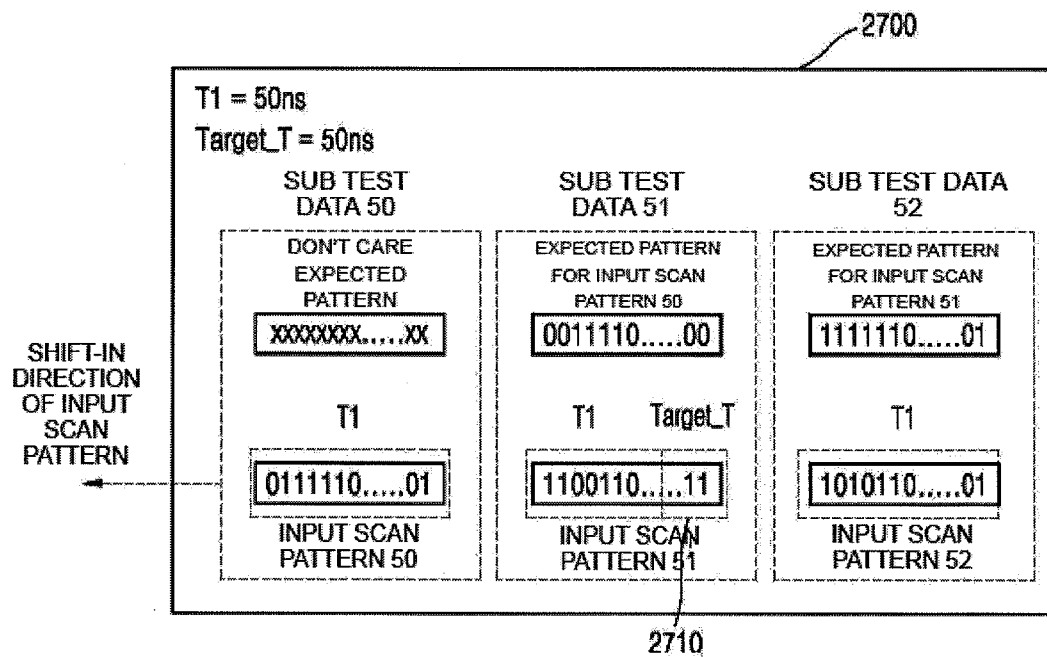


Fig. 28

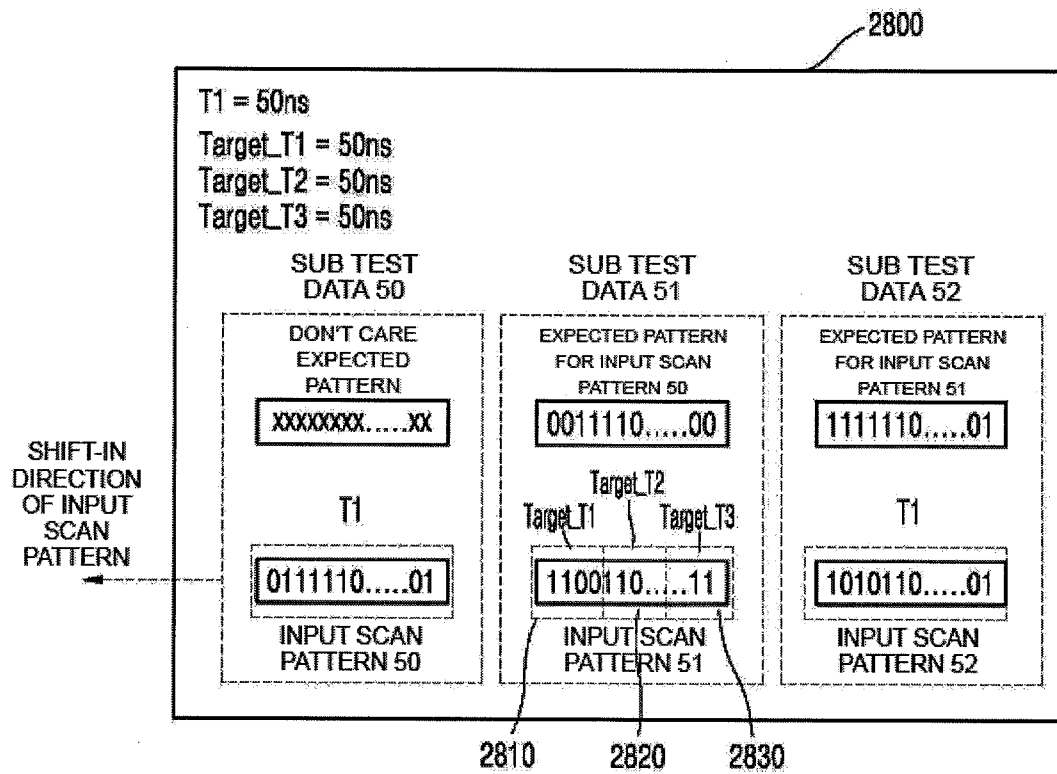


Fig. 29

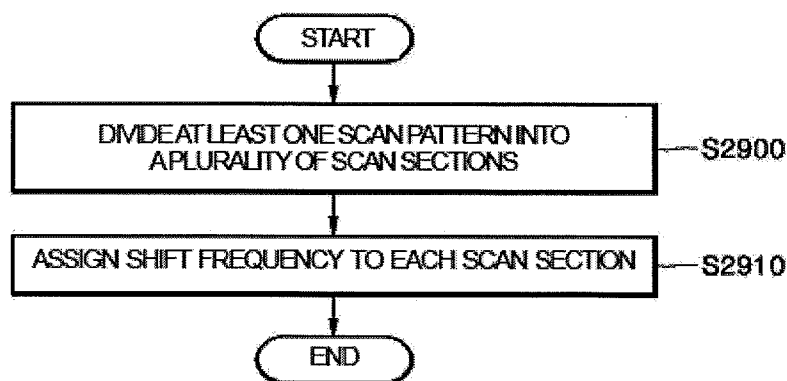


Fig. 30

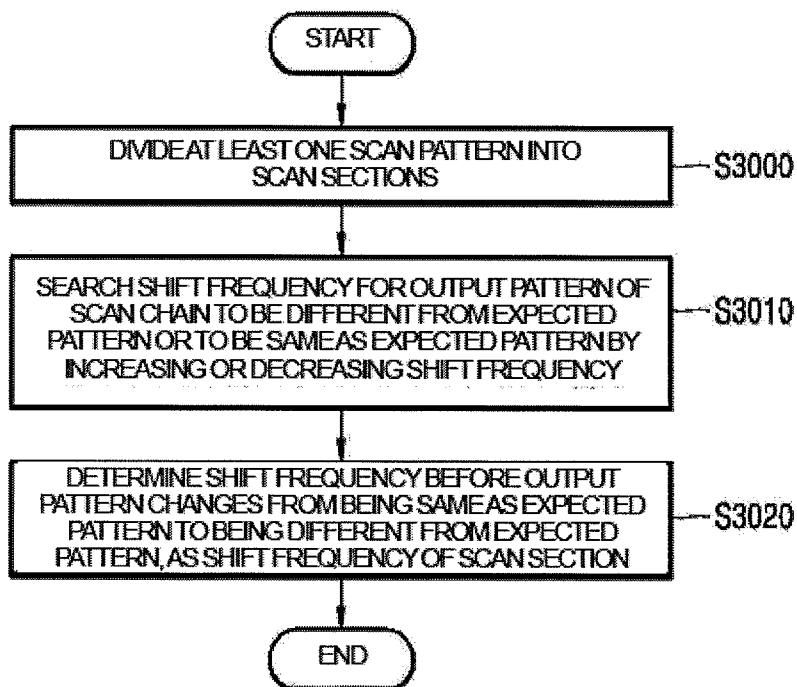


Fig. 31

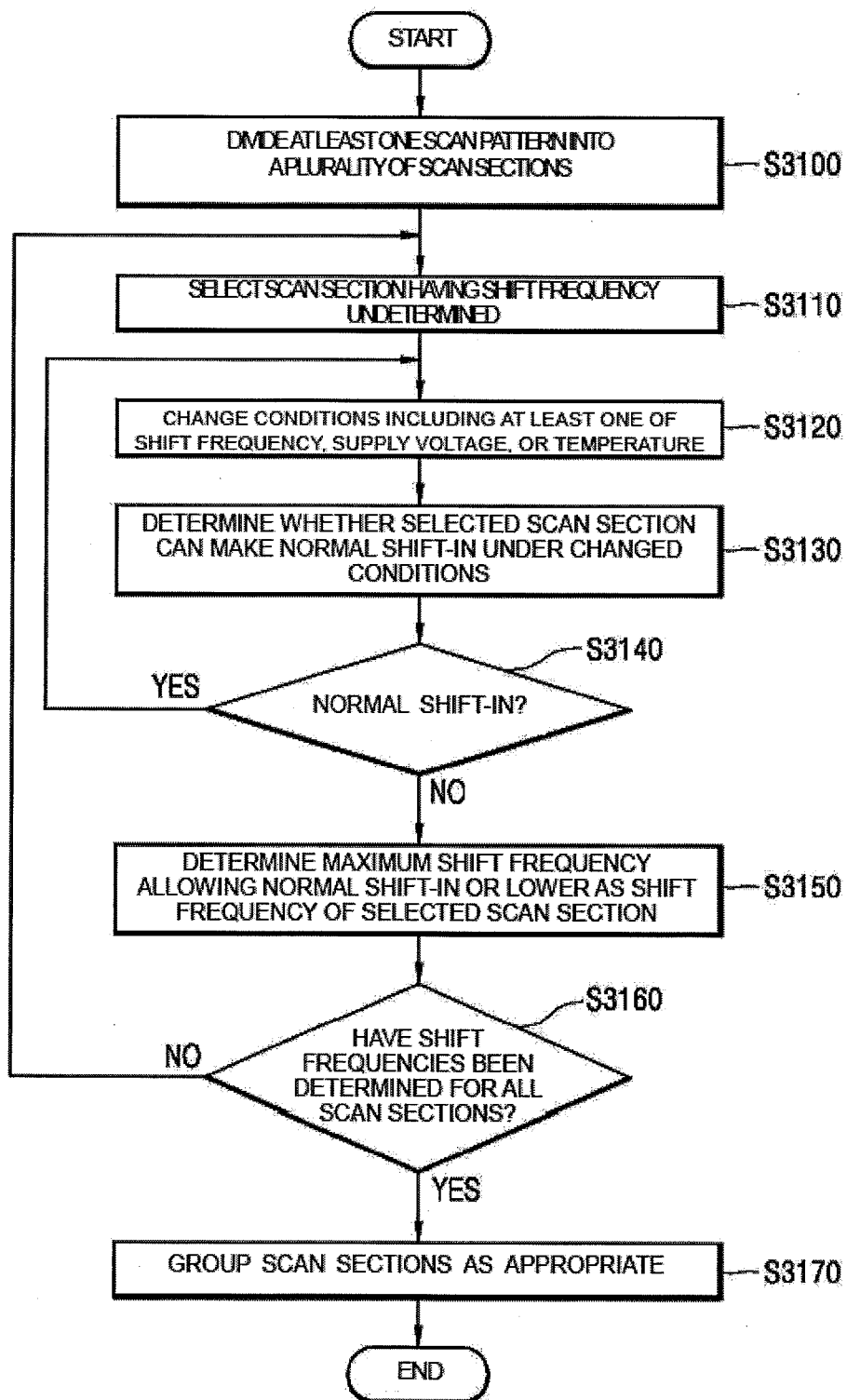


Fig. 32

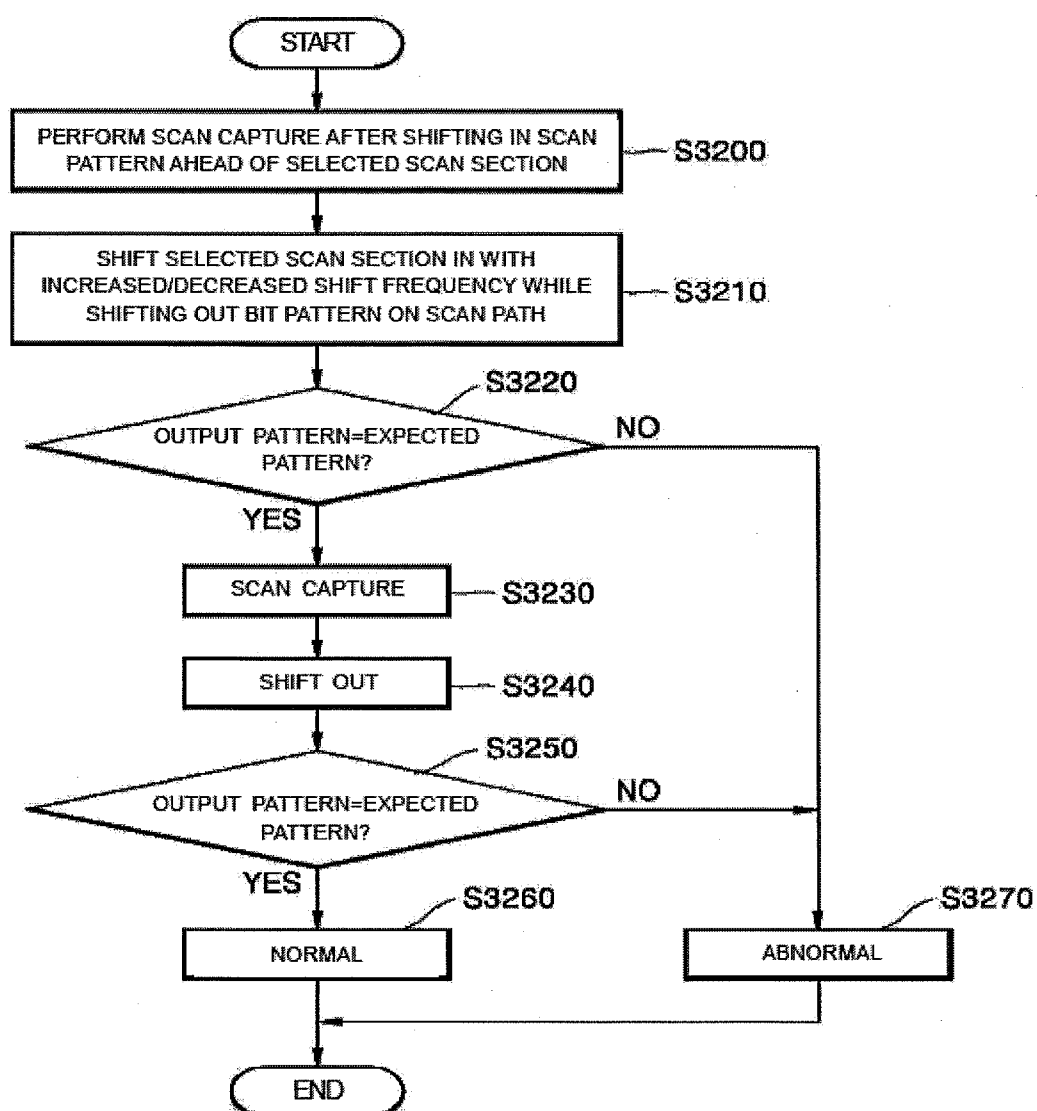


Fig. 33

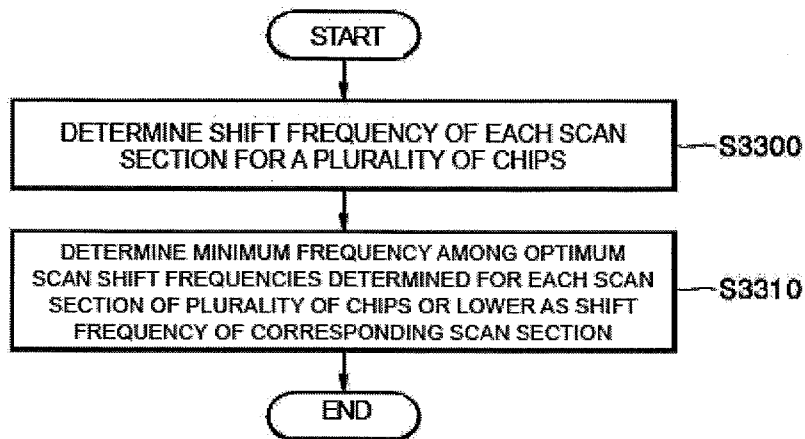


Fig. 34

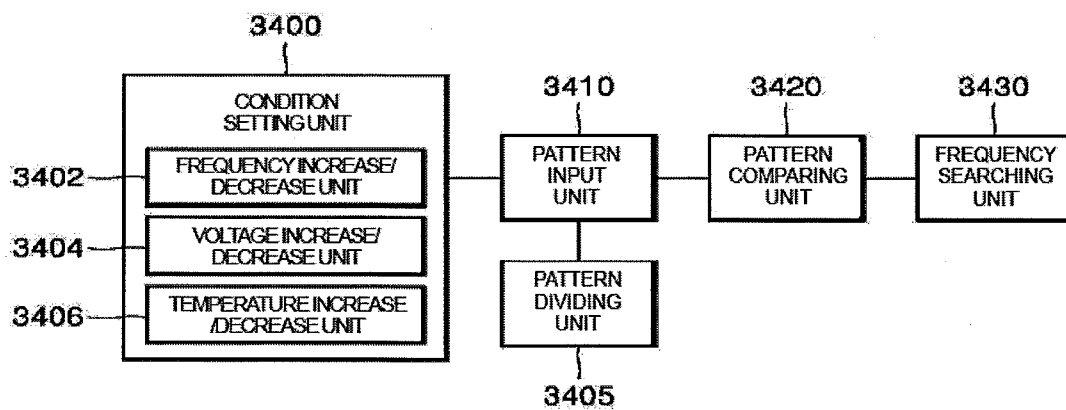


Fig. 35

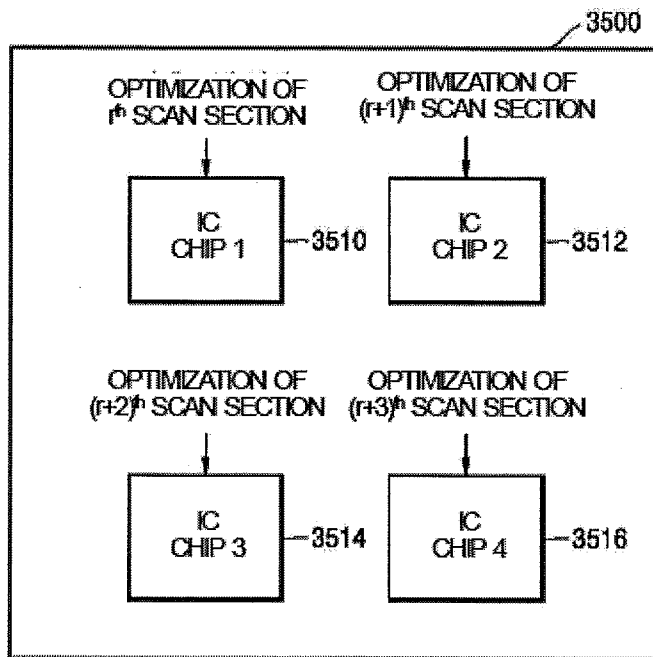
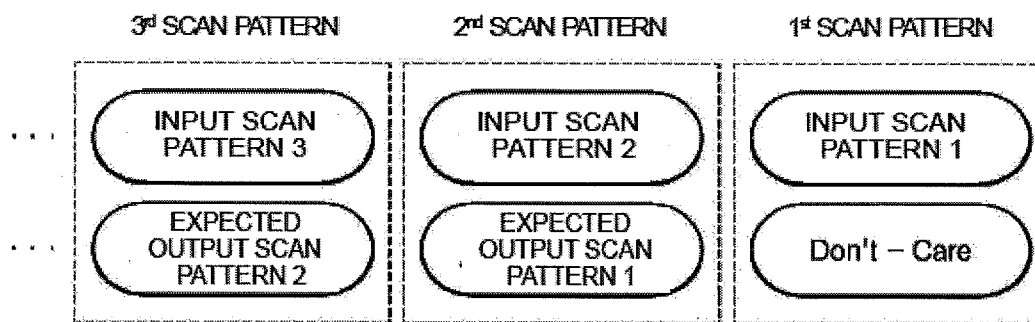
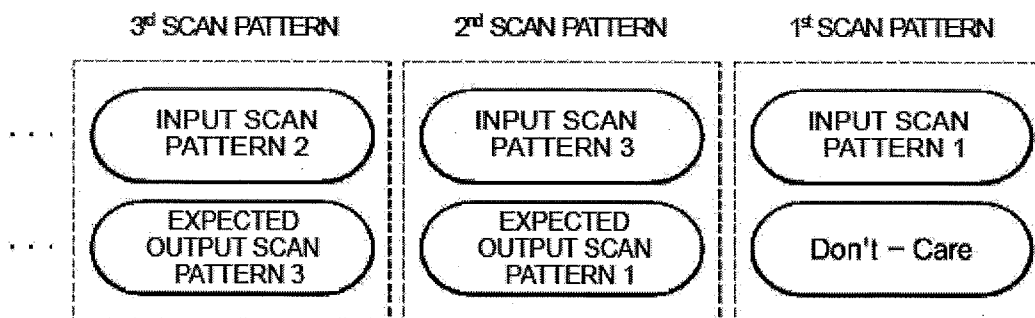


Fig. 36



(a) ORDER OF ORIGINAL SCAN PATTERN



(b) ORDER OF REORDERED SCAN PATTERN

Fig. 37

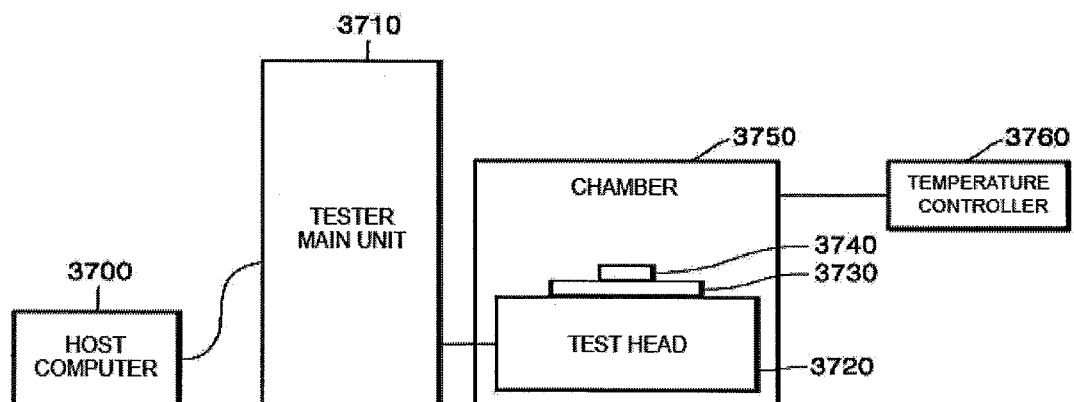


Fig. 38

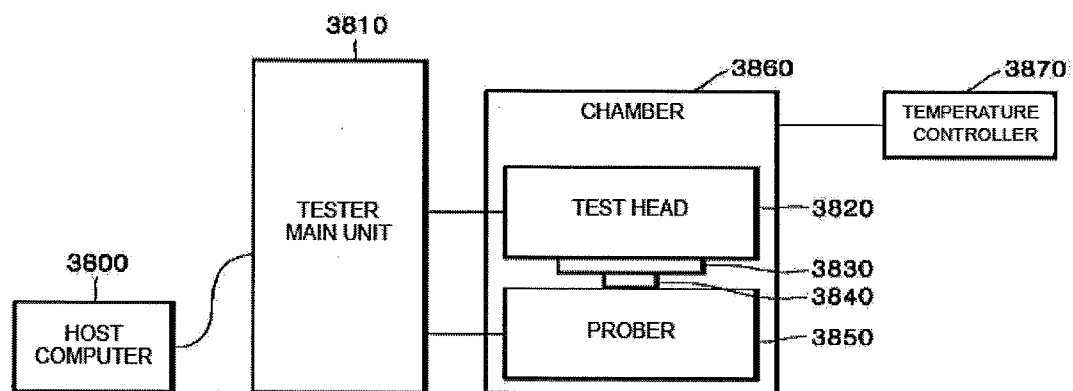


Fig. 39

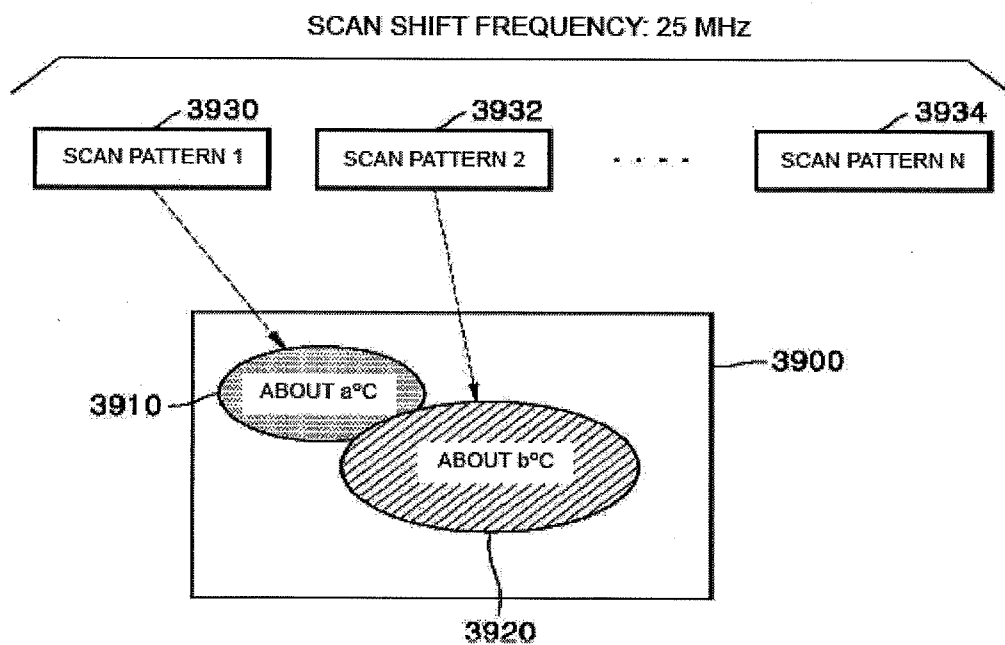


Fig. 40

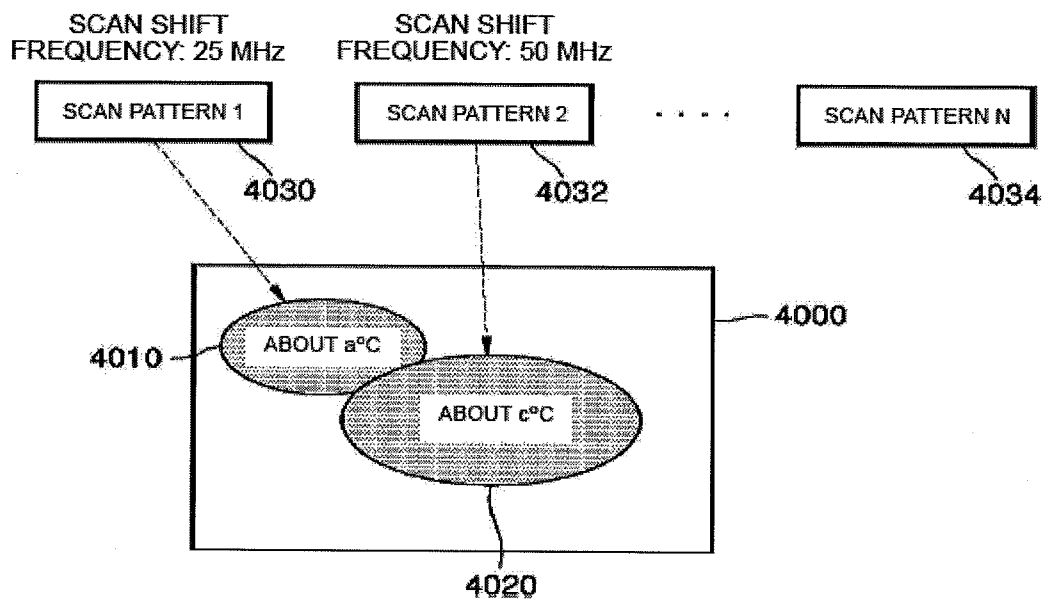


Fig. 41

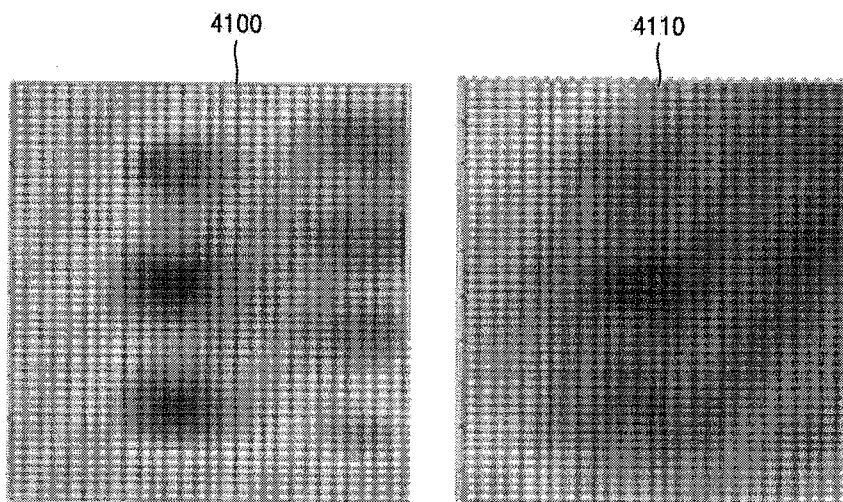


Fig. 42

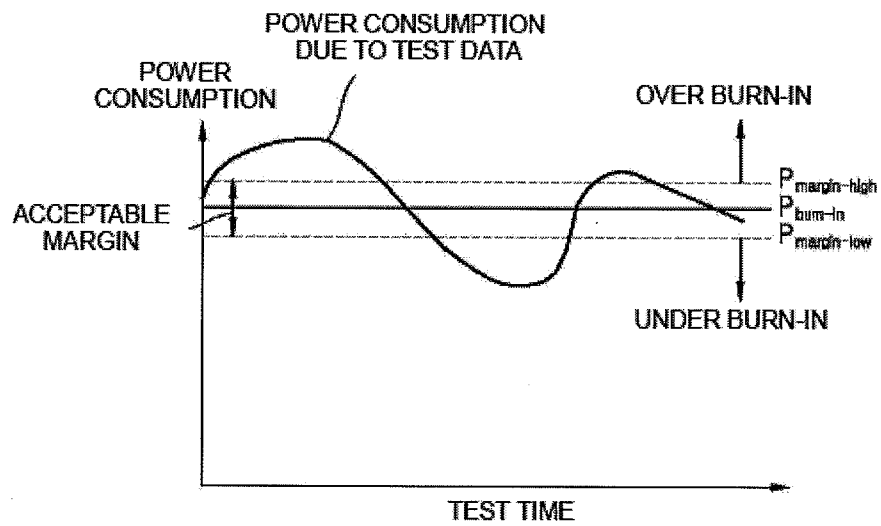


Fig. 43

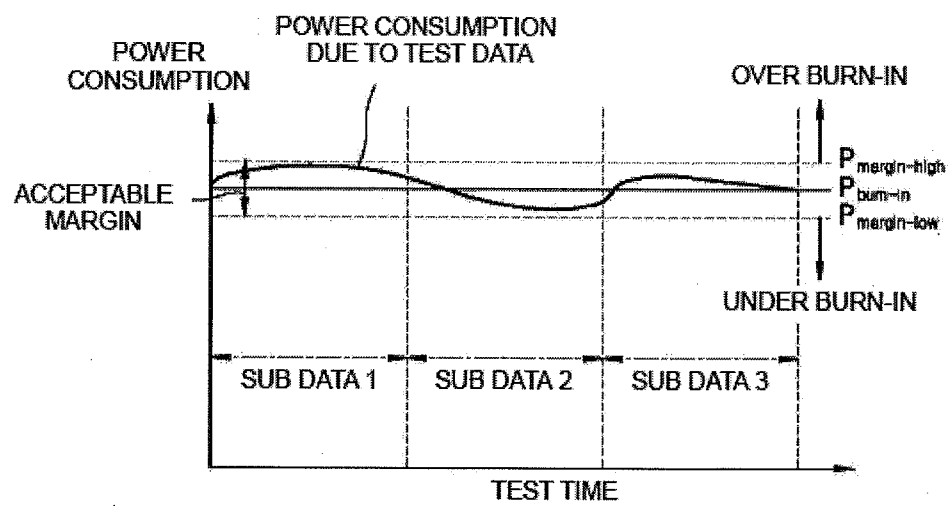


Fig. 44

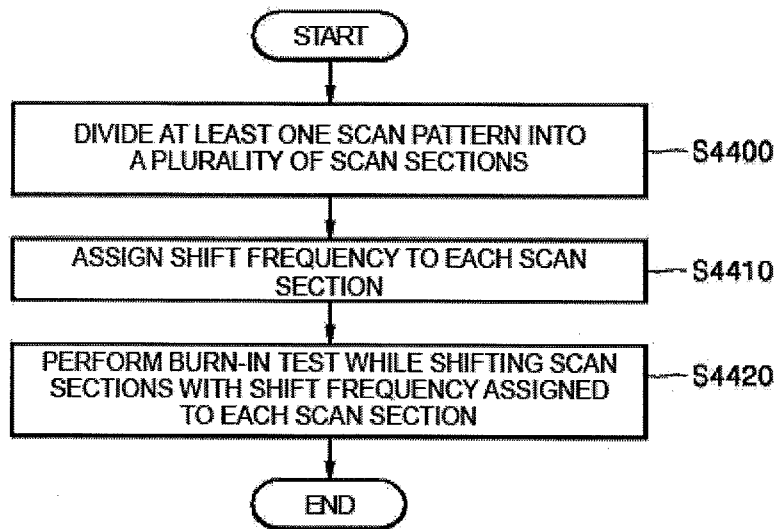


Fig. 45

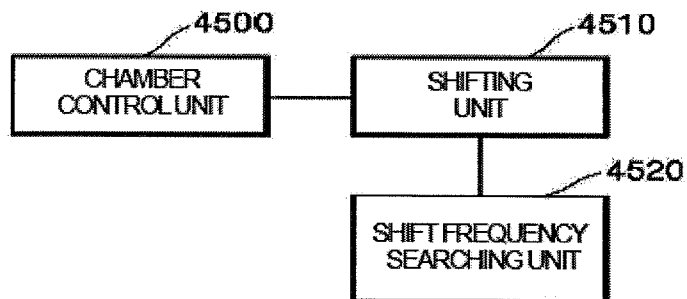


Fig. 46

Scan pattern #	Leakage Power (mW)	Power consumption for nominal shift frequency (25MHz)		Power-limit-based method (Power limit : 285 mW)		Shift-frequency- scaling-based method	INCREASE/ DECREASE RATIO OF (2) WITH RESPECT TO (1)
		Dynamic Power (mW)	Total Power (mW)	(1) Max. Shift freq. (MHz)	Test pass/ fail	(2) Max. Shift freq. (MHz)	
1	52	187	239	31.15	PASS	47.06	51.08
2	51	163	214	35.89	PASS	44.44	23.82
3	51	162	213	36.11	PASS	44.44	23.06
4	51	155	206	37.74	PASS	44.44	17.75
5	51	172	223	34.01	PASS	44.44	30.66
6	60	125	175	47.00	FAIL	36.36	-22.64
7	51	174	225	33.62	PASS	44.44	32.18
8	51	168	219	34.82	PASS	44.44	27.62
9	51	170	221	34.41	PASS	44.44	29.14
10	51	180	231	32.50	PASS	44.44	36.74
11	51	172	223	34.01	PASS	44.44	30.66
12	51	171	222	34.21	PASS	44.44	29.90

Fig. 47

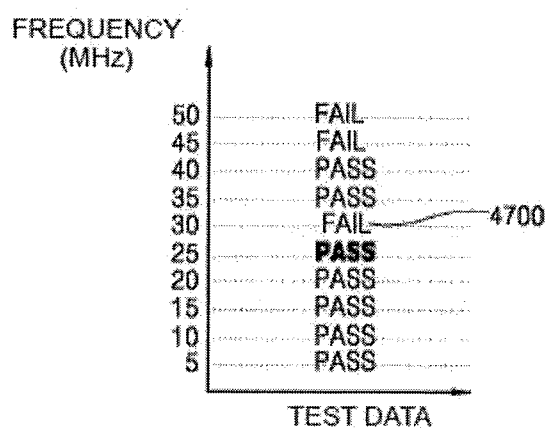


Fig. 48

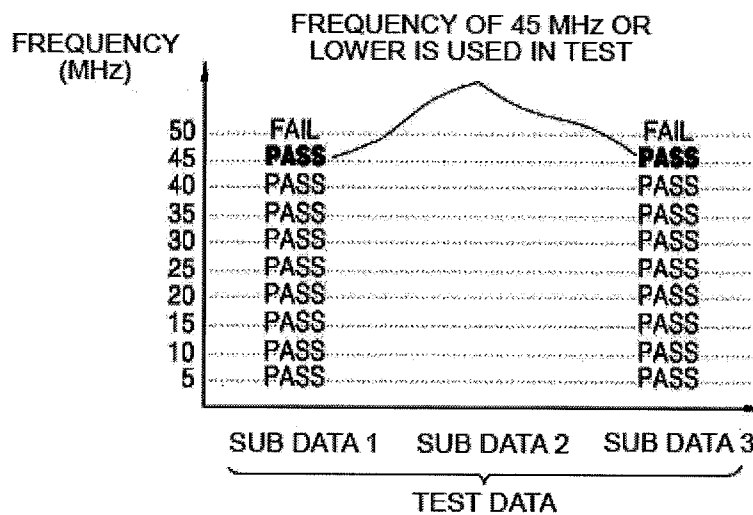


Fig. 49

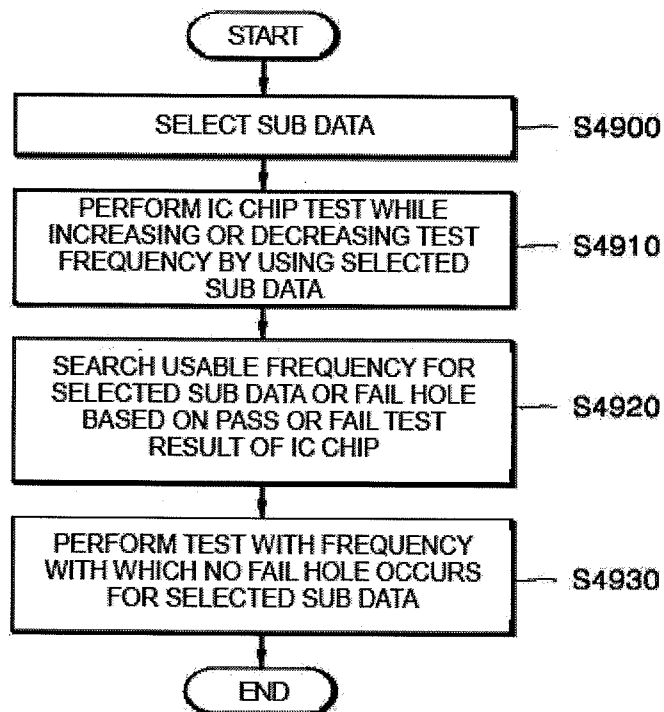


Fig. 50

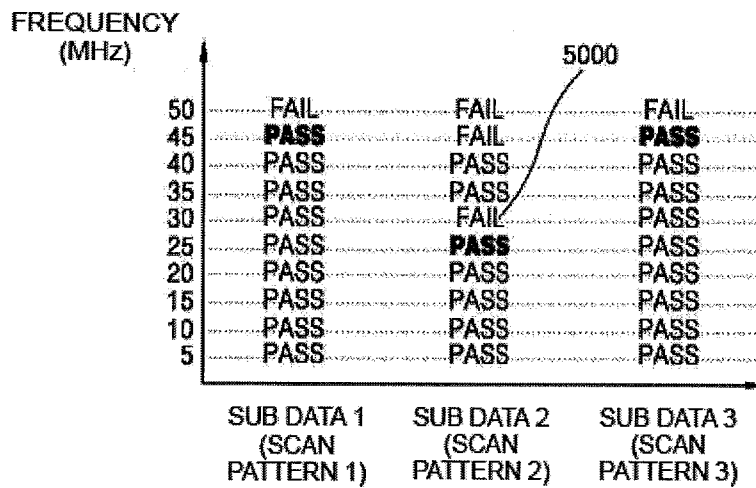


Fig. 51

