Chip Antennas for General Electronic Equipment for Consumer

REFLOW

■PART NUMBER

T	S	A	5	N	A	2	K	2	G	4	5	N	S	0	0	1	T	
①				②	③		④	⑤				⑥	⑦				⑧	⑨

①Series

Code (1)(2)(3)(4)	
TSA3	Chip antenna for General Electronic Equipment for Consumer, Dual type
TSA5	Chip antenna for General Electronic Equipment for Consumer, Monopole type
TSA6	Chip antenna for General Electronic Equipment for Consumer, Inverted F type

(1) Product Group

Code	
T	Ceramic RF Device

(2) Category

Code	Recommended equipment	Quality Grade
S	General Electronic Equipment for Consumer	3

(3) Type

Code	
A	Antenna

(4) Features, Characteristics

Code	
3	Dual type
5	Monopole type
6	Inverted F type

②Series name

Code	Series name
N	Standard

③Dimensions(case size)

Code	Dimensions(case size)[mm]
18	1.6×0.8
A2	3.2×1.6
A4	10.0×4.0
A6	8.0×6.0

④Thickness

Code	Thickness[mm]
D	0.65max
K	0.5±0.1
L	1.0±0.3

⑤Frequency

Code (example)	Frequency[MHz]
1G57	1574.397～1576.443
2G45	2400～2500
5G55	3100～8000

1.Describe Center Frequency
2.Lower Frequency for Dual band

⑥Electrode type

Code	Electrode type
N	External electrode

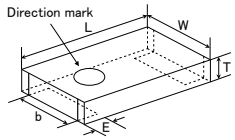
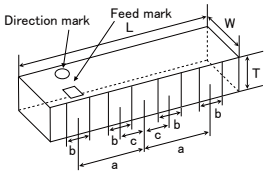
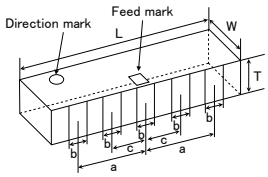
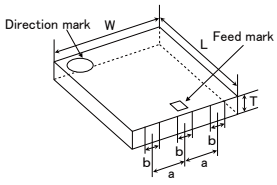
⑦Internal Code

⑧Packaging

Code	Packaging
T	Taping

⑨Internal Code

■EXTERNAL DIMENSIONS / STANDARD QUANTITY

TSA5N18D type, TSA5NA2K type	TSA6NA3L type	TSA3NA4L type	TSA5NA6L type
			

Type	L	W	T	E	a	b	c	Standard quantity[pcs]
TSA5N18D	1.6±0.1	0.8±0.1	0.65max	0.3±0.1	–	0.6±0.1	–	5000
TSA5NA2K	3.2±0.15	1.6±0.15	0.5±0.1	0.5±0.2	–	1.0min.	–	3000
TSA6NA4L	10.0±0.3	4.0±0.3	1.0±0.3	–	2.5±0.3	1.0±0.3	1.0±0.3	2000
TSA3NA4L	10.0±0.3	4.0±0.3	1.0±0.3	–	3.0±0.3	0.8±0.3	1.5±0.3	2000
TSA5NA6L	8.0±0.3	6.0±0.3	1.0±0.3	–	1.8±0.2	1.0±0.3	–	1000

Unit : mm

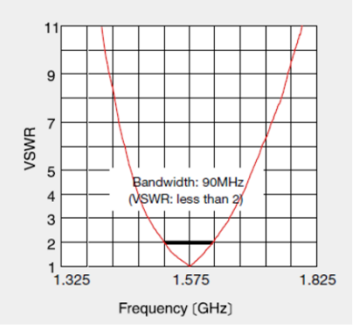
■PART NUMBER

Applications	New part number	Old part number (for reference)	External dimensions (L×W×T) [mm]	Center frequency [MHz]
GPS	TSA5NA2K1G57NS001T	AH 316M157501-T	3.2×1.6×0.5	1575
W-LAN (2.4GHz)	TSA5N18D2G45NV001T	AH 168M245001-T	1.68×0.8×0.65max.	2450
Bluetooth®	TSA5NA2K2G45NS001T	AH 316M245001-T	3.2×1.6×0.5	2450
ZigBee	TSA6NA4L2G45NS0S1T	AH 104F2450S1-T	10.0×4.0×1.0	2450
W-LAN (2.4GHz/5GHz)	TSA3NA4L2G45NS0D1T	AH 104N2450D1-T	10.0×4.0×1.0	2450/5400
UWB & WiMAX (3.5GHz)	TSA5NA6L5G55NS003T	AH 086M555003-T	8.0×6.0×1.0	5550

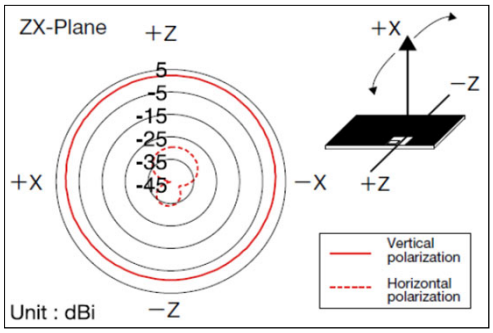
■ELECTRICAL CHARACTERISTICS / TYPICAL CHARACTERISTICS

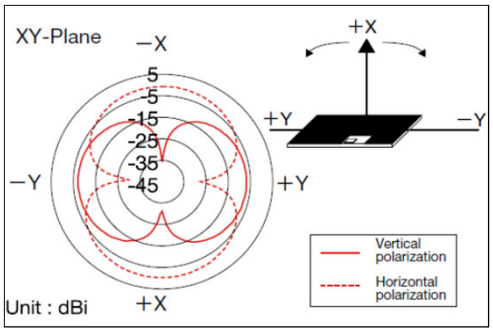
Typical characteristics on TAIYO YUDEN evaluation board

●TSA5NA2K1G57NS001T



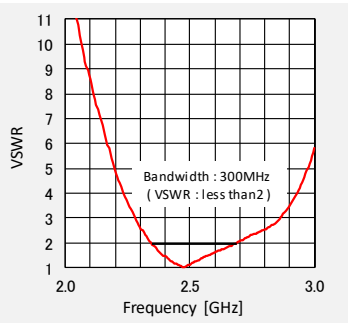
Typical characteristics of VSWR



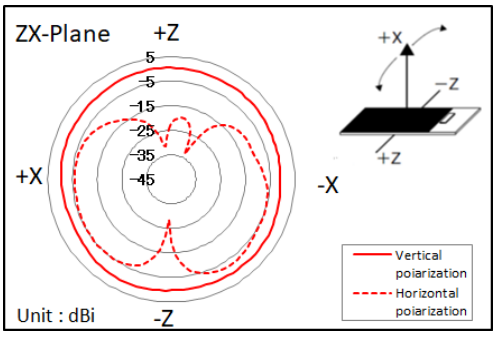


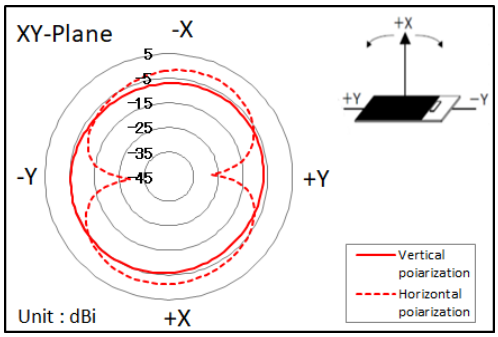
Typical characteristics of radiation pattern (@1.575GHz)

●TSA5N18D2G45NV001T



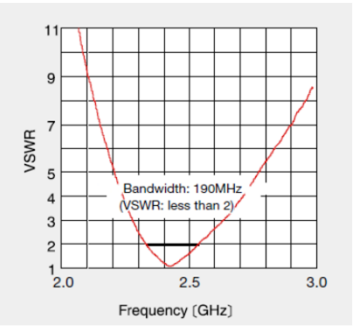
Typical characteristics of VSWR



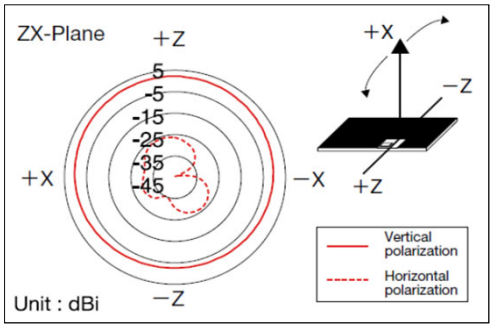


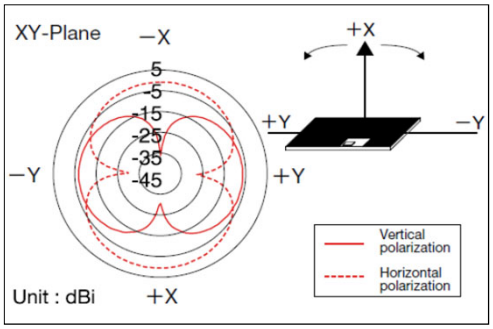
Typical characteristics of radiation pattern (@2.45GHz)

●TSA5NA2K2G45NS001T



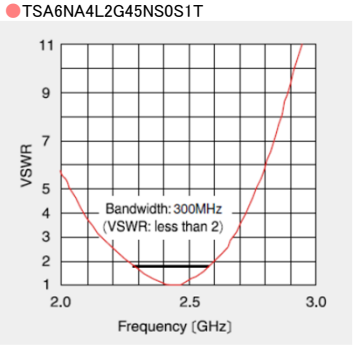
Typical characteristics of VSWR



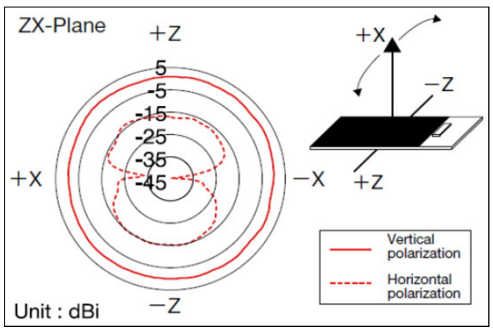


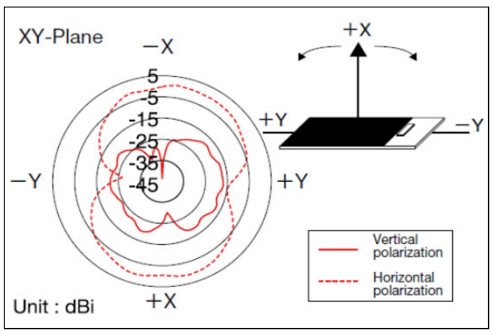
Typical characteristics of radiation pattern (@2.45GHz)

●TSA6NA4L2G45NS0S1T



Typical characteristics of VSWR



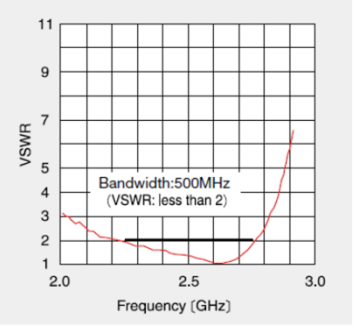


Typical characteristics of radiation pattern (@2.45GHz)

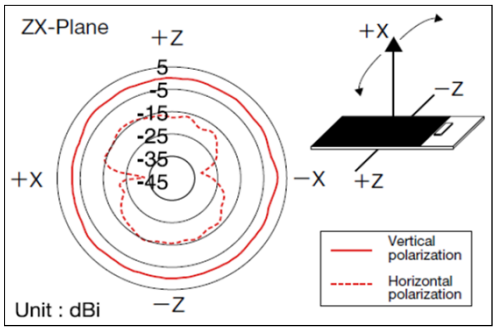
■ELECTRICAL CHARACTERISTICS / TYPICAL CHARACTERISTICS

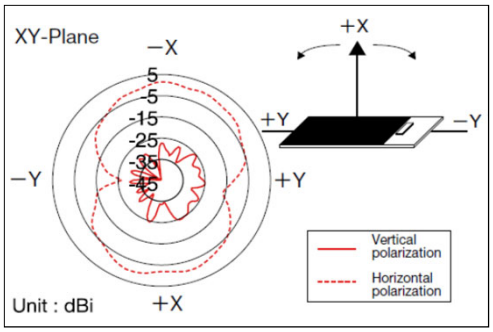
Typical characteristics on TAIYO YUDEN evaluation board

●TSA3NA4L2G45NS0D1T

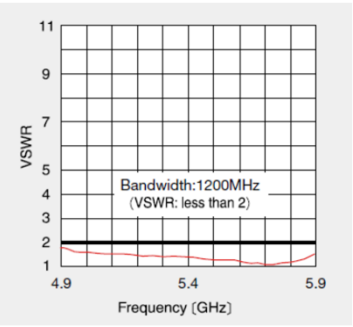


Typical characteristics of VSWR(2GHz band)

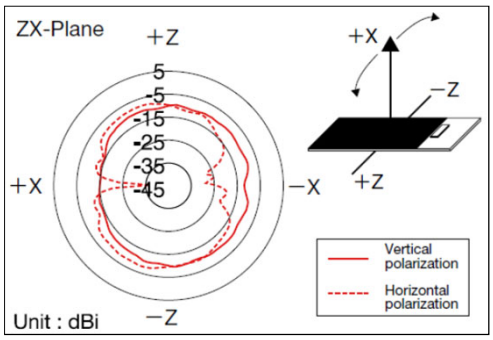


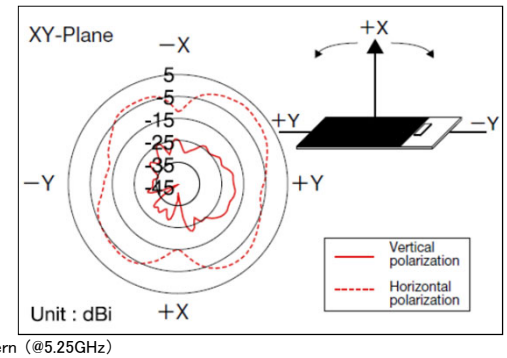


Typical characteristics of radiation pattern (@2.45GHz)



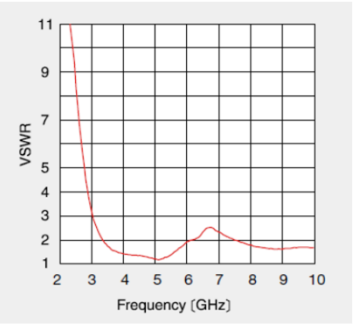
Typical characteristics of VSWR(5GHz band)



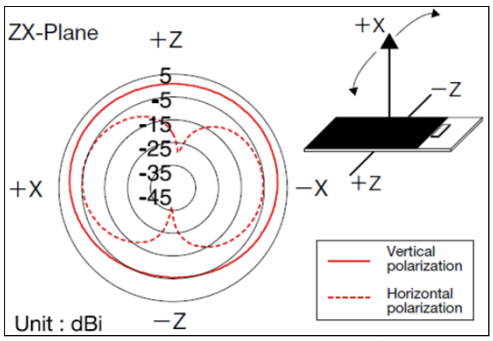


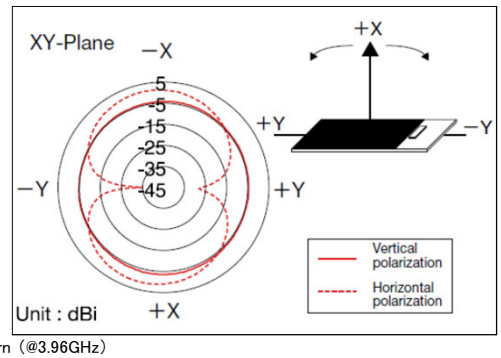
Typical characteristics of radiation pattern (@5.25GHz)

●TSA5NA6L5G55NS003T



Typical characteristics of VSWR





Typical characteristics of radiation pattern (@3.96GHz)