

part ID	Part name	Rating	Max Rating
C203	GRM21BB31A475K	4.7 $\mu$ F	10V
C204	GRM188F11H104Z	0.1 $\mu$ F	50V
C205	330HD150-14295PF	150 $\mu$ F	330V
C206	GR731CW0BB473K	0.047 $\mu$ F	350V
C207	GR731CW0BB473K	0.047 $\mu$ F	350V
C211	GRM21BB31A475K	4.7 $\mu$ F	10V
C212	267E_1002_686M	68 $\mu$ F	10V
D201	D4F60	4A	600V
D202	D4F60	4A	600V
DN201	GSD2004S-V	1A	300V
F201	EYP2BN082		4A(50V)
IC202	LT3420EMS#PBF		16V
L201	BL-F3-1	26.4 $\mu$ H	
L202	BLM18AG601SN1	600 $\Omega$ /100MHz	
Q201	GT10G131(TE12L,Q)	Ic=200A	Vces=400V
R201	RR0816P-202-DC	2K $\Omega$	1/16W
R202	RR0816P-273-DC	27K $\Omega$	1/16W
R203	MCR10EZHJ104	100K $\Omega$	1/8W
R204	MCR10EZHJ104	100K $\Omega$	1/8W
R205	RR0816P-101-DC	100 $\Omega$	1/16W
R206	RR0816P-104-DC	100K $\Omega$	1/16W
R207	MCR10EZHJ104	100K $\Omega$	1/8W
R208	MCR10EZHJ104	100K $\Omega$	1/8W
R209	RR0816P-101-DC	100 $\Omega$	1/16W
R210	RR0816P-103-DC	10K $\Omega$	1/16W
R211	RR0816P-103-DC	10K $\Omega$	1/16W
R214	HV731JT**305J	3M $\Omega$	1/10W
R215	HV731JT**305J	3M $\Omega$	1/10W
T201	SBL-6.4		500V
T202	KP-30LM		4KV/8KV
TP204	LC-2-G-黒		
VR201	ST-4ETB_10k	10K $\Omega$	200V

part ID	Part name	Rating	Max Rating
C301	GRM1882C1H102J	1000pF	50V
C302	10SVP120M	120 $\mu$ F	10V
C303	10SVP120M	120 $\mu$ F	10V
C304	GRM1882C1H101J	100pF	50V
C305	GRM1882C1H470J	47pF	50V
C306	GRM188B31E224K	0.22 $\mu$ F	25V
C307	10SVP47M	47 $\mu$ F	10V
C308	6SVP100M	100 $\mu$ F	6V
C309	EEE1CA470SP	47 $\mu$ F	16V
C310	GRM188B11H332K	3300pF	50V
C311	EEE1CA470SP	47 $\mu$ F	16V
C312	GRM1882C1H470J	47pF	50V
C313	GRM188B31E224K	0.22 $\mu$ F	25V
C314	10SVP47M	47 $\mu$ F	10V
C315	6SVP100M	100 $\mu$ F	6V
C316	GRM1882C1H470J	47pF	50V
C317	20SVP47M	47 $\mu$ F	20V
C318	GRM188B11H102K	1000pF	50V
C319	20SVP47M	47 $\mu$ F	20V
C320	EEE1VA470P	47 $\mu$ F	35V
C321	GRM188F11H104Z	0.1 $\mu$ F	50V
C322	GRM188F11H104Z	0.1 $\mu$ F	50V
C323	GRM188F11H104Z	0.1 $\mu$ F	50V
CN301	B12B-ZR(LF)(SN)		
CN303	IL-S-2P-S2T2-EF		
CN304	CMS1410		
D301	D4F60	4A	600V
D302	DG1H3-5063	0.7A	30V
D303	DG1H3-5063	0.7A	30V
D304	M1FS4-5063	0.7A	30V
F301	TF16AT3.15T		3.15A
IC301	LTC1627CS8#PBF		
IC302	LTC1627CS8#PBF		
IC303	LT1317CS8#PBF		
IC304	LT1308ACS8#PBF		
IC305	TC7SH14FU(TE85L,F)		
IC306	TC7SH126FU(TE85L,F)		
IC307	TC7SH126FU(TE85L,F)		
IC308	LT1110CS8#PBF		
J301	HEC2392-01-150		
L301	CDRH125NP-5R8N	5.8 $\mu$ H	
L302	CD54NP-220M	22 $\mu$ H	
L303	CD54NP-150M	15 $\mu$ H	
L304	CD54NP-150M	15 $\mu$ H	
L305	CDRH10D68NP-220M	22 $\mu$ H	
L306	CDRH10D68NP-820M	82 $\mu$ H	
L307	DLP31SN551SL2	550 $\Omega$ /100MHz	
L308	BLM41PG750SN1	75 $\Omega$ /100MHz	
LD301	TLGE60T(F)		If=50mA
Q301	DTC123JE		50V
Q302	DTC123JE		50V
Q303	TPCP8102(TE85L,F)		20V
Q304	DTC123JE		50V
R301	RR0816P-102-DC	1K $\Omega$	1/16W
R302	RR0816P-102-DC	1K $\Omega$	1/16W
R303	RR0816P-473-DC	47K $\Omega$	1/16W

R304	RR0816P-274-DC	270K $\Omega$	1/16W
R305	RR0816P-124-DC	120K $\Omega$	1/16W
R306	RR0816P-563-DC	56K $\Omega$	1/16W
R307	MCR03EZHF105	1M $\Omega$	1/10W
R308	RR0816P-124-DC	120K $\Omega$	1/16W
R309	RR0816P-823-DC	82K $\Omega$	1/16W
R310	RR0816P-244-DC	240K $\Omega$	1/16W
R311	RR0816P-823-DC	82K $\Omega$	1/16W
R312	RR0816P-104-DC	100K $\Omega$	1/16W
R313	RR0816P-242-DC	240K $\Omega$	1/16W
R314	RR0816P-152-DC	1.5K $\Omega$	1/16W
R315	RR0816Q-270-DC	27 $\Omega$	1/16W
R316	RR0816Q-270-DC	27 $\Omega$	1/16W
R317	RR0816Q-270-DC	27 $\Omega$	1/16W
R318	RR0816P-153-DC	15K $\Omega$	1/16W
R319	RR0816P-153-DC	15K $\Omega$	1/16W
R320	RR0816P-274-DC	270K $\Omega$	1/16W
R321	RR0816P-563-DC	1K $\Omega$	1/16W
R322	RR0816P-472-DC	1K $\Omega$	1/16W
R323	RR0816P-202-DC	1K $\Omega$	1/16W
R328	RR0816P-101-DC	1K $\Omega$	1/16W

VS301	EZAEG3A50A*	50V
VS302	EZAEG3A50A*	50V
VS303	EZAEG3A50A*	50V
ZD301	RD6.8UM-A(B2)	150mW

part ID	Part name	Rating	Max Rating
C501	GRM21BB30J226M	22 $\mu$ F	6.3V
C502	GRM21BB30J226M	22 $\mu$ F	6.3V
C503	GRM21BB30J226M	22 $\mu$ F	6.3V
C504	GRM1552C1H8R0D	8pF	50V
C505	GRM1554C1H1R0C	1pF	50V
C506	GRM1554C1H1R0C	1pF	50V
C507	GRM155F11E104Z	0.1 $\mu$ F	25V

HLP501	AHD1403-244ST08		-0.5dBd
L501	BLM21AG102SN1	1K $\Omega$ / 100MHz	
L502	LQG18HN3N9S00	3.9nH	
R501	RR0510P-104-DC	100K $\Omega$	1/16W
R502	RR0510P-103-DC	10K $\Omega$	1/16W
R503	RR0510R-100-DC	10 $\Omega$	1/16W
R504	RR0510R-100-DC	10 $\Omega$	1/16W
R505	RR0510R-100-DC	10 $\Omega$	1/16W
R506	RR0510R-100-DC	10 $\Omega$	1/16W
R507	RR0510R-100-DC	10 $\Omega$	1/16W
R508	RR0510R-100-DC	10 $\Omega$	1/16W
R509	RR0510R-100-DC	10 $\Omega$	1/16W

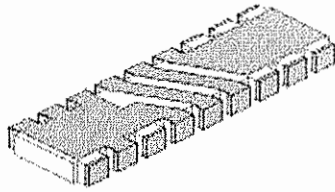
AHD1403-244ST01

Surface Mountable Dielectric Chip Antennas

# AHD1403-244ST01

**1. Features**

- a) Small sizes and low profile
- b) Wide frequency range



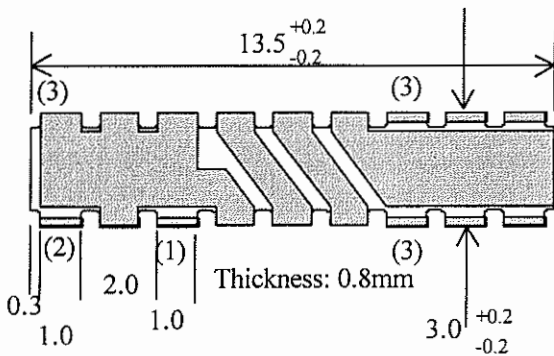
**2. Specifications**

Type	AHD1403-244ST01
Dimensions	13.5 × 3 × 0.8 mm
Operating frequency	2400 – 2484 MHz
Operating temperature	-25 - +85 °C

**3. Characteristics (Reference)**

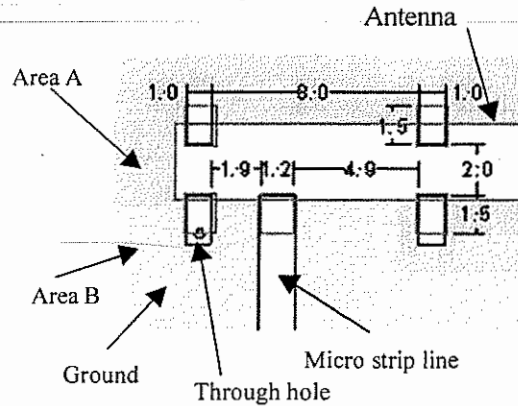
Bandwidth in VSWR ≤ 2	140 MHz
Gain –peak-	0 dBd
Gain –average-	-6.6 dBd
Radiation Efficiency	36 %

**4. Dimensions**



- (1) in/out terminal
- (2) GND
- (3) Fixing Electrode

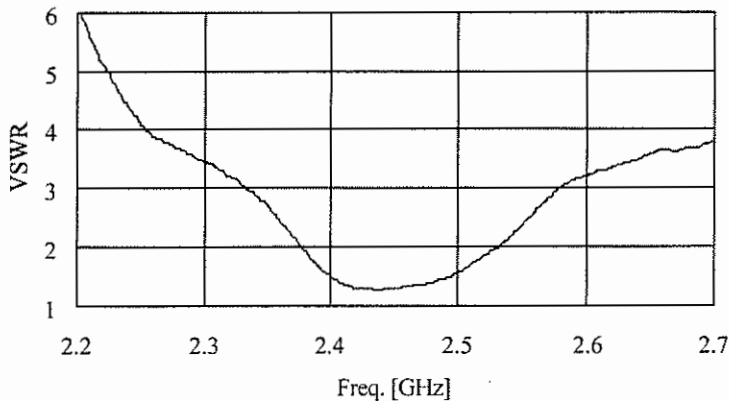
**5. Recommended land pattern**



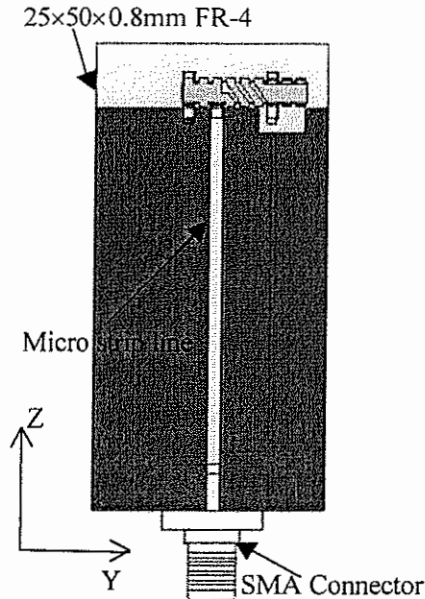
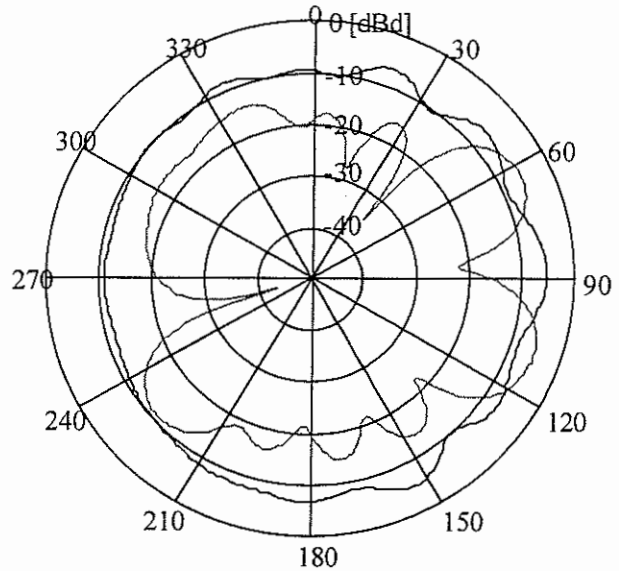
Note:

- \*1 We recommend to make ground plane on area 'B'. You may not make ground plane on area 'A'.
- \*2 Please connect this land to the ground with thru holes.

**6. VSWR vs. Frequency**



## 7. Test Board

8. Radiation pattern in XY plane  $f=2442\text{MHz}$ 9. Series of center Frequencies( $f_0$ )

In case of surface mount antennas, the center frequency is dependent on the PCB size or other surrounding components and materials, and therefore can be different from what is measured with our standard test board. For the AHD1403-244ST, we have therefore prepared series of items having different center frequencies with a certain frequency step, in order to cancel the above mentioned frequency shift by the environmental factors.

So with our AHD1403-244ST series, you can easily and quickly find the most suitable antenna for your own mounting conditions.

## Example 1:

If you take the AHD1403-244ST01 (nominal  $f_0=2440\text{MHz}$ ), but see that the center frequency is 2490MHz ( 50MHz higher ) when mounted on your own board :

We recommend to use AHD1403-244ST25 (nominal  $f_0=2390\text{MHz}$ ,  $\Delta f_0=-50\text{MHz}$ ).

## Example 2:

If you take the AHD1403-244ST01 (nominal  $f_0=2440\text{MHz}$ ), but see that the center frequency is 2350MHz ( 90MHz lower ) when mounted on your own board :

We recommend to use AHD1403-244ST10 (nominal  $f_0=2530\text{MHz}$ ,  $\Delta f_0=+90\text{MHz}$ ).

## Note:

- 1) The specifications given herein may be changed or modified at anytime without prior notice.
- 2) Please request specifications for the part your plan to use.

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