

# CRYSTAL OSCILLATOR

(SMD TYPE)

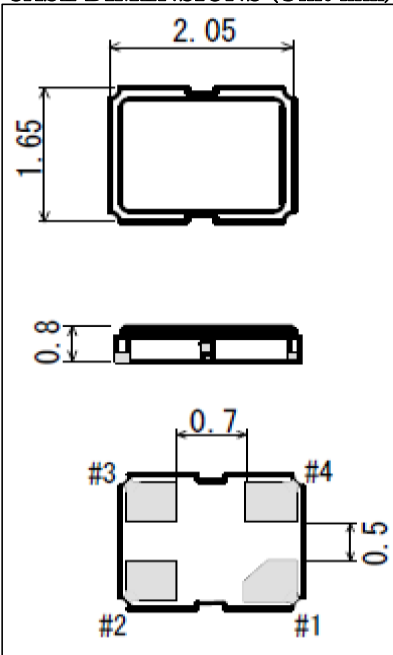
AOK-C2016HT

Surface Mount Type CMOS Crystal Oscillator(AEC-Q200 Compliance Model)

## SPECIFICATIONS

Frequency Range	1.8 ~ 170.00(1.8~133.00 @1.8V)			MHz
Frequency Stability	±25, ±50	±50, ±100	±100, ±150	ppm
Supply Voltage	1.8±5%, 2.5±5%, 3.3±5%			V
Current Consumption	40 max.			mA
Output Voltage	$V_{OH}: 0.9V_{DD} \text{ min.}(0.8V @1.8V)$			V
	$V_{OL}: 0.1V_{DD} \text{ max.}(0.2V @1.8V)$			
Symmetry	45/55			%
Rise/Fall Time	6 max.			nS
Load	15			pF
Operating Temperature	-40~+85	-40~+105	-40~+125	°C
Storage Temperature	-55~+125			°C

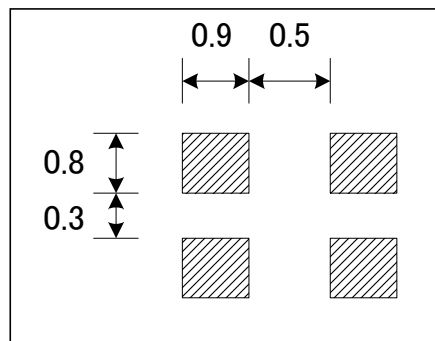
## CASE DIMENSIONS (Unit:mm)



## PIN CONNECTIONS

Pin#1	E/D(NC)	Pin#3	Output
Pin#2	GND	Pin#4	$V_{DD}$

## RECOMMENDED PADS



## E/D FUNCTION

Pin#1: Open	Pin#3: Active
Pin#1: $\geq 0.7V_{DD}$	Pin#3: Active
Pin#1: $\leq 0.3V_{DD}$	Pin#3: High-Z

# CRYSTAL OSCILLATOR

(SMD TYPE)

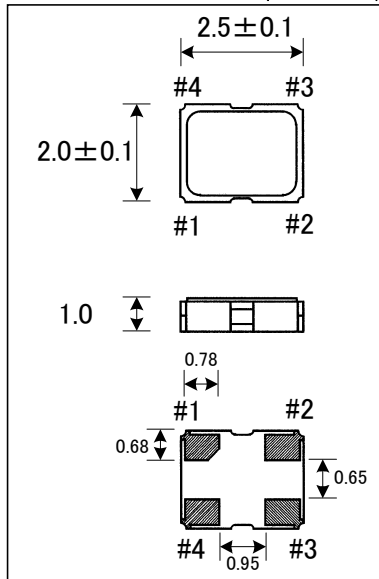
AOK-C2520HT

Surface Mount Type CMOS Crystal Oscillator(AEC-Q200 Compliance Model)

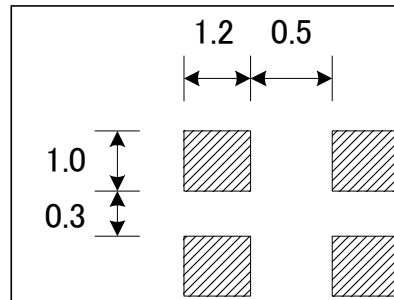
## SPECIFICATIONS

Frequency Range	1.8 ~ 170.00(1.8~133.00 @1.8V)			MHz
Frequency Stability	±25, ±50	±50, ±100	±100, ±150	ppm
Supply Voltage	1.8±5%, 2.5±5%, 3.3±5%			V
Current Consumption	40 max.			mA
Output Voltage	$V_{OH}: 0.9V_{DD} \text{ min.}(0.8V @1.8V)$			V
	$V_{OL}: 0.1V_{DD} \text{ max.}(0.2V @1.8V)$			
Symmetry	45/55			%
Rise/Fall Time	6 max.			nS
Load	15			pF
Operating Temperature	-40~+85	-40~+105	-40~+125	°C
Storage Temperature	-55~+125			°C

## CASE DIMENSIONS (Unit:mm)



## RECOMMENDED PADS



## PIN CONNECTIONS

Pin#1	E/D(NC)	Pin#3	Output
Pin#2	GND	Pin#4	$V_{DD}$

## E/D FUNCTION

Pin#1: Open	Pin#3: Active
Pin#1: $\geq 0.7V_{DD}$	Pin#3: Active
Pin#1: $\leq 0.3V_{DD}$	Pin#3: High-Z

# CRYSTAL OSCILLATOR

(SMD TYPE)

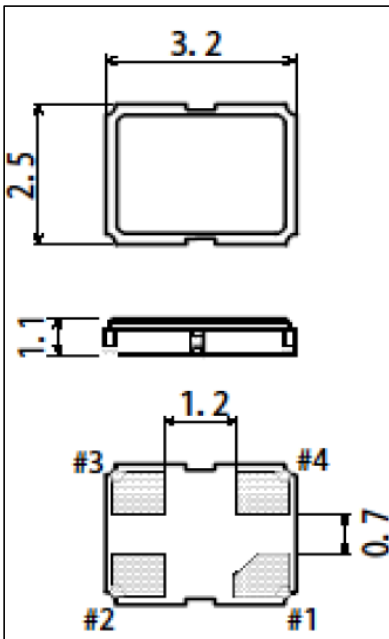
AOK-C3225HT

Surface Mount Type CMOS Crystal Oscillator(AEC-Q200 Compliance Model)

## SPECIFICATIONS

Frequency Range	1.8 ~ 170.00(1.8~133.00 @1.8V)			MHz
Frequency Stability	±25, ±50	±50, ±100	±100, ±150	ppm
Supply Voltage	1.8±5%, 2.5±5%, 3.3±5%			V
Current Consumption	40 max.			mA
Output Voltage	$V_{OH}: 0.9V_{DD} \text{ min.}(0.8V @1.8V)$			V
	$V_{OL}: 0.1V_{DD} \text{ max.}(0.2V @1.8V)$			
Symmetry	45/55			%
Rise/Fall Time	6 max.			nS
Load	15			pF
Operating Temperature	-40~+85	-40~+105	-40~+125	°C
Storage Temperature	-55~+125			°C

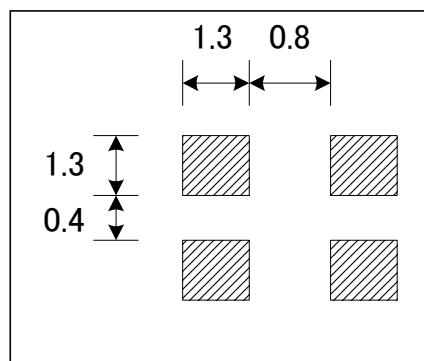
## CASE DIMENSIONS (Unit:mm)



## PIN CONNECTIONS

Pin#1	E/D(NC)	Pin#3	Output
Pin#2	GND	Pin#4	$V_{DD}$

## RECOMMENDED PADS



## E/D FUNCTION

Pin#1: Open	Pin#3: Active
Pin#1: $\geq 0.7V_{DD}$	Pin#3: Active
Pin#1: $\leq 0.3V_{DD}$	Pin#3: High-Z

# CRYSTAL OSCILLATOR

(SMD TYPE)

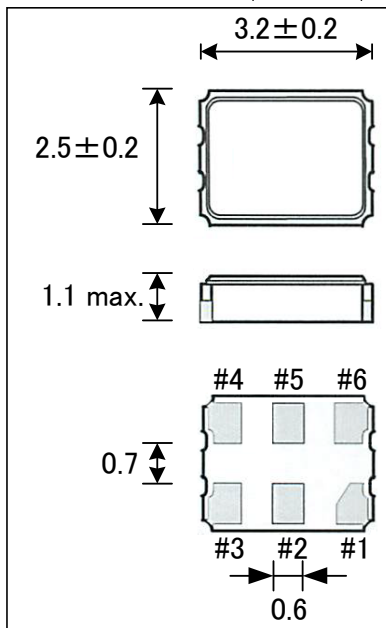
AOK-L3225HT

Surface Mount Type LVDS Crystal Oscillator(AEC-Q200 Compliance Model)

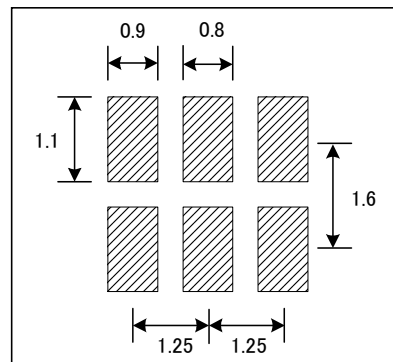
## SPECIFICATIONS

Frequency Range	40 ~ 250.00	MHz
Frequency Stability	±25(40~170MHz), ±50,±100	ppm
Supply Voltage	2.5±5%,3.3±5%	V
Current Consumption	50 max.	mA
Differential Output Voltage	0.247~0.454 (@1.25V)	V
Symmetry	45/55	%
Rise/Fall Time	0.4 max.	nS
Load	100	Ω
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C
RMS Jitter	5 (RMS)	ps
Phase Jitter	1 (12KHz~20MHz) ex0.4ps type@100MHz	ps

## CASE DIMENSIONS (Unit:mm)



## RECOMMENDED PADS



## PIN CONNECTIONS

Pin#1	E/D	Pin#4	Out 1
Pin#2	NC	Pin#5	Out 2
Pin#3	GND	Pin#6	Vcc

## E/D FUNCTION

Pin#1	Open	Pin#4,5	Active
Pin#1	≥0.7Vcc	Pin#4,5	Active
Pin#1	≤0.3Vcc	Pin#4,5	High-Z

# CRYSTAL OSCILLATOR

(SMD TYPE)

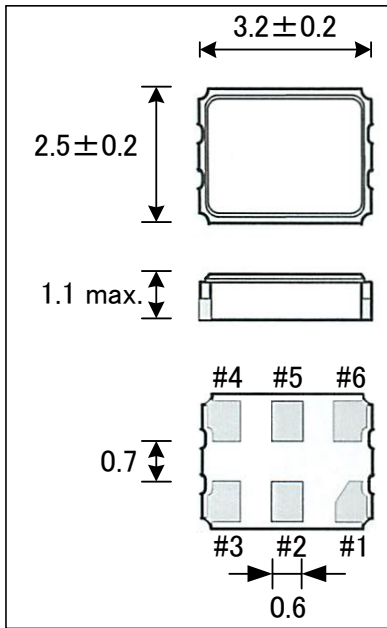
AOK-P3225HT

Surface Mount Type LVPECL Crystal Oscillator(AEC-Q200 Compliance Model)

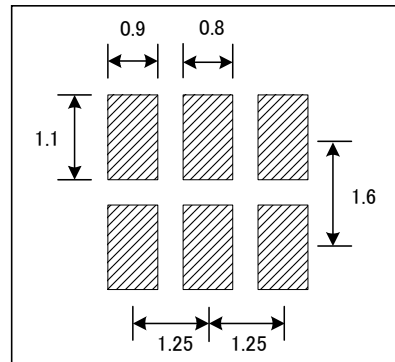
## SPECIFICATIONS

Frequency Range	40 ~ 250.00	MHz
Frequency Stability	±25(40~170MHz), ±50,±100	ppm
Supply Voltage	2.5±5%,3.3±5%	V
Current Consumption	50 max.	mA
Output Voltage	$V_{OH}: V_{CC}-1.025 \sim V_{CC}-0.88$ $V_{OL}: V_{CC}-1.81 \sim V_{CC}-1.62$	V
Symmetry	45/55	%
Rise/Fall Time	0.4 max.	nS
Load	50	Ω
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C
RMS Jitter	5 (RMS)	ps
Phase Jitter	1 (12KHz~20MHz) ex0.4ps type@100MHz	ps

## CASE DIMENSIONS (Unit:mm)



## RECOMMENDED PADS



## PIN CONNECTIONS

Pin#1	E/D	Pin#4	Out 1
Pin#2	NC	Pin#5	Out 2
Pin#3	GND	Pin#6	Vcc

## E/D FUNCTION

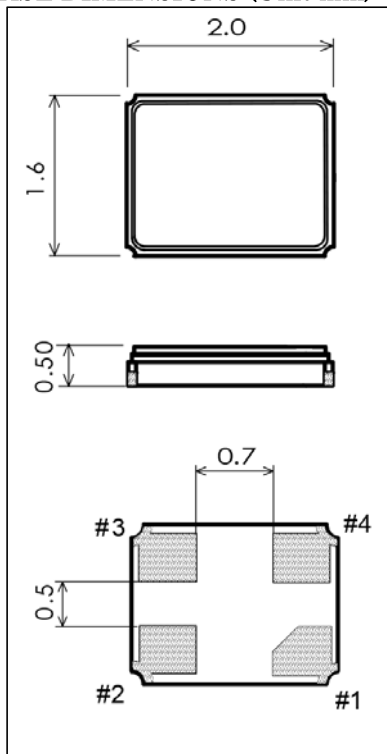
Pin#1	Open	Pin#4,5	Active
Pin#1	$\geq 0.7V_{CC}$	Pin#4,5	Active
Pin#1	$\leq 0.3V_{CC}$	Pin#4,5	High-Z

<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-2016HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

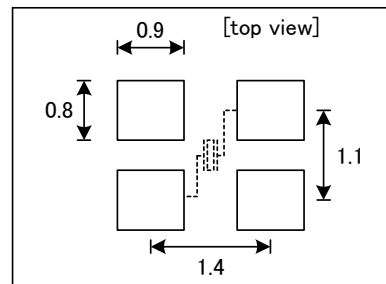
**SPECIFICATIONS**

Frequency Range	20 ~ 200.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	8	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

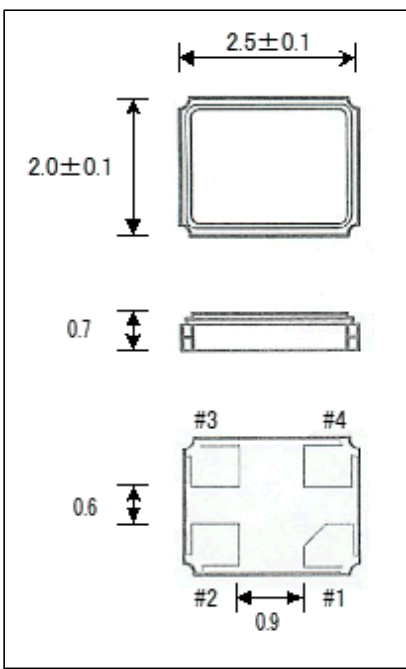
Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND

<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-2520HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

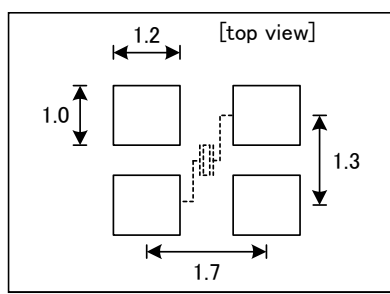
**SPECIFICATIONS**

Frequency Range	12 ~ 200.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	8	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

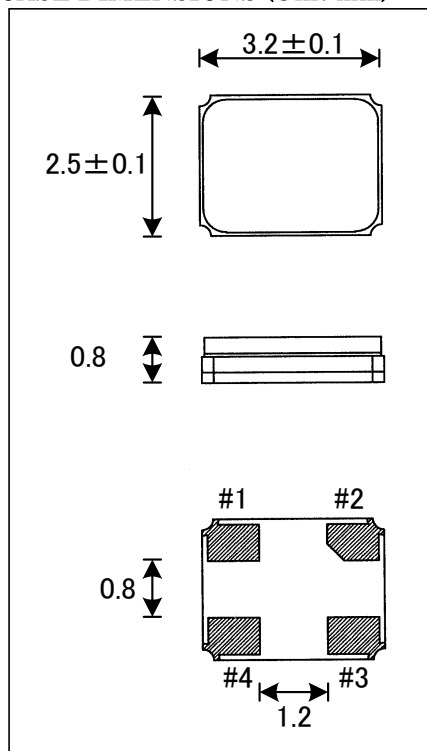
Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND

<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-3225HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

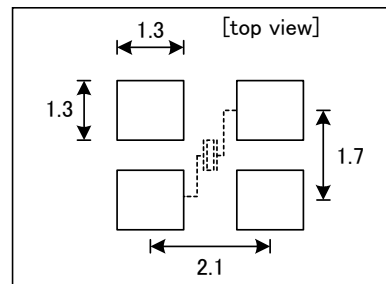
**SPECIFICATIONS**

Frequency Range	8 ~ 200.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	8	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND

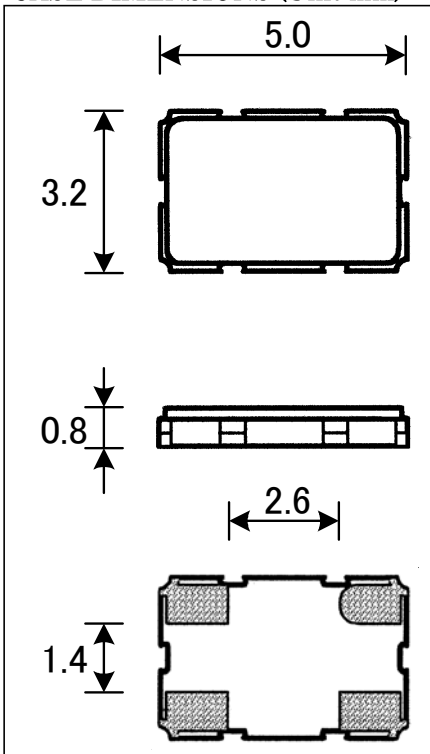


<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-5032HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

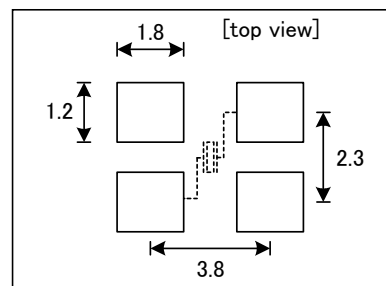
**SPECIFICATIONS**

Frequency Range	8 ~ 200.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	16, SERIES	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

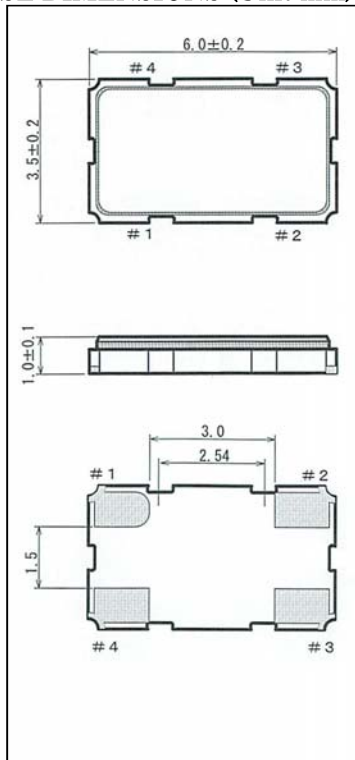
Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND

<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-6035HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

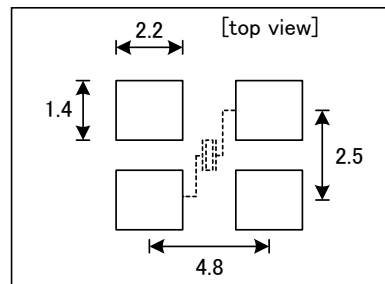
**SPECIFICATIONS**

Frequency Range	8 ~ 67.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	16, SERIES	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

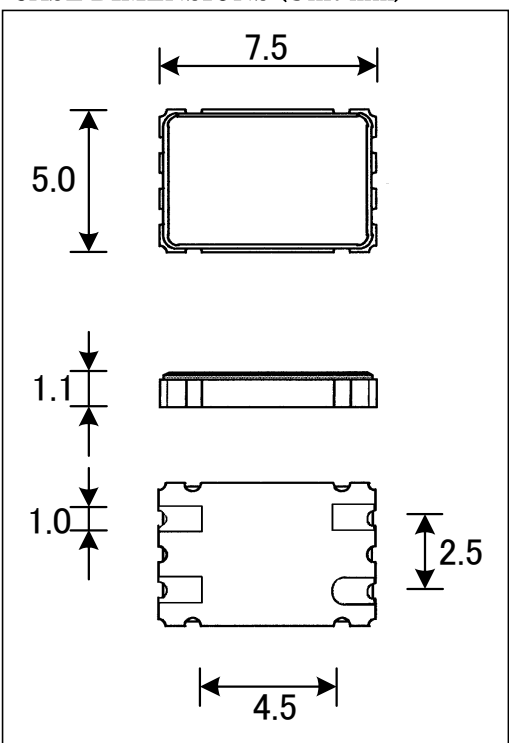
Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND

<b>CRYSTAL UNIT</b>	(SMD TYPE)	<b>AUK-7550HT</b>
AT-Cut Surface Mount Type Crystal Unit (AEC-Q200 Compliance Model)		

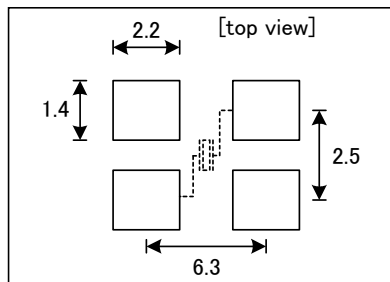
**SPECIFICATIONS**

Frequency Range	6 ~ 100.00	MHz
Operation Mode	Fundamental	
Frequency Tolerance@25°C	±10~±50	ppm
Frequency Stability	±50,±100,±150	ppm
ESR	60~100 max.	Ω
Load Capacitance	16, SERIES	pF
Drive Level	0.1(20~70MHz),0.2(70+~200MHz)	mW
Operating Temperature	-40~+85, -40~+105, -40~+125	°C
Storage Temperature	-55~+125	°C

**CASE DIMENSIONS (Unit:mm)**



**RECOMMENDED PADS**



**PIN CONNECTIONS**

Pin#1	Crystal	Pin#3	Crystal
Pin#2	GND	Pin#4	GND