

## Features

- Surface Mount Devices
- Lead free device  
Size 1005mm/0402mils, 1608mm/0603mils  
Surface Mount packaging for automated assembly
- Very low capacitance 0.15pF

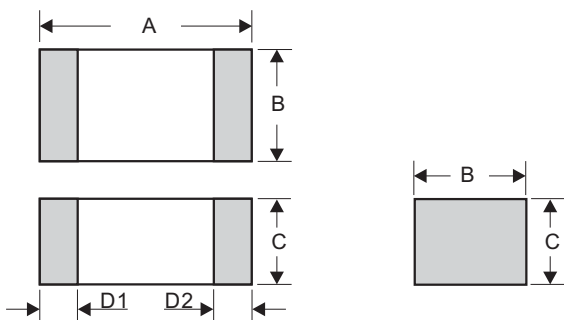
## IEC Compatibility

- IEC61000-4-2(ESD):Contact:±8kv,Air:±15kv

## Applications

- Antenna port
- USB port
- High speed data transmission line

## Dimensions(0402/0603)



CODE	DIM	Millimeters		Inches	
		Min	Max	Min	Max
0402	A	0.85	1.15	0.033	0.045
	B	0.40	0.60	0.016	0.024
	C	0.40	0.60	0.016	0.024
	D1/D2	0.10	0.30	0.004	0.012
0603	A	1.45	1.75	0.057	0.069
	B	0.65	0.95	0.026	0.037
	C	0.70	0.90	0.028	0.035
	D1/D2	0.10	0.50	0.004	0.020

## Product Name

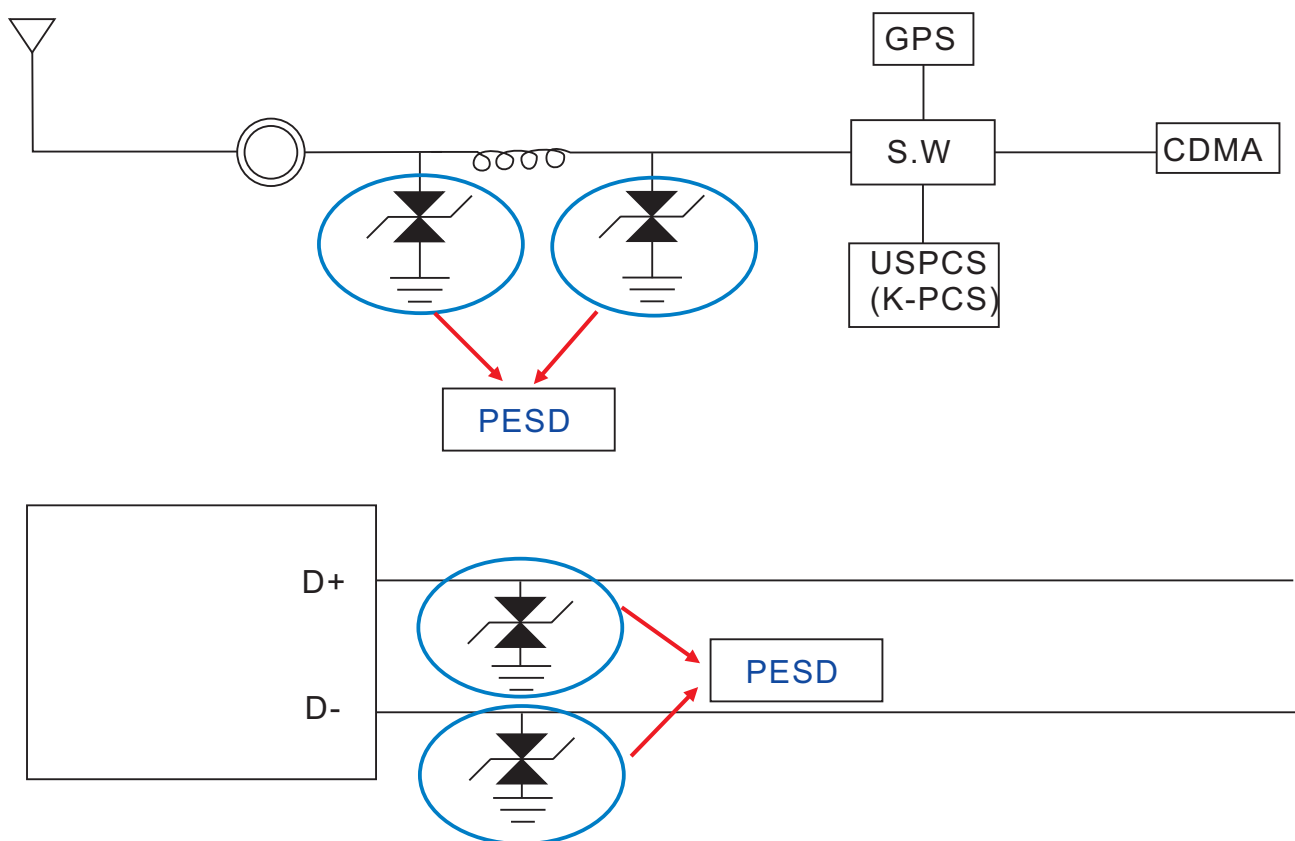
PESD040205A015FR

Packaging Type	B:Buik pack R:Tape& Reel pake
Termination Type	S:Solderable(Ag/Pd/Pt) F:Electroplate(Pb-free)
Capacitance	015:0.15pF 020:0.2pF 030:0.3pF
Trigger Voltage	A:300V B:500V C:1000V
Working Voltage	05:5V 12:12V 14:14V 18:18V 24:24V
Size Designator	0402:1.0*0.5mm 0603:1.6*0.8mm
Series Name	PESD:Product Series

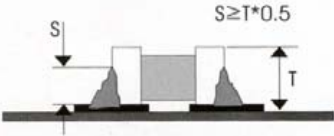

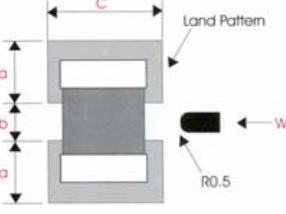
## Electrical Characteristics

Part Number	Continuous operating Voltage (V)	Leakage Current $I_L$ ( $\mu A$ )	Response time (ns)	Trigger Voltage $V_T$ (V)	Clamping Voltage $V_C$ (V)	Capacitance $C_P@1MHz$ (pF)
PESD040205A015FR	5	0.05	0.6	300	9	0.15
PESD040212A015FR	12	0.05	0.6	300	23	0.15
PESD040214A015FR	14	0.05	0.6	300	25	0.15
PESD040218A015FR	18	0.05	0.6	300	30	0.15
PESD040224A015FR	24	0.05	0.6	300	35	0.15
PESD060305A015FR	5	0.05	0.6	300	9	0.15
PESD060312A015FR	12	0.05	0.6	300	23	0.15
PESD060314A015FR	14	0.05	0.6	300	25	0.15
PESD060318A015FR	18	0.05	0.6	300	30	0.15
PESD060324A015FR	24	0.05	0.6	300	35	0.15

## Product Application

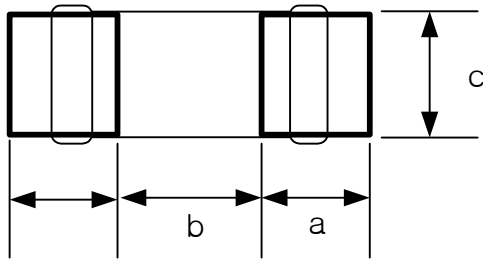


Reliability Test

ITEM	REQUIREMENTS	TEST CONDITION
Operating temperature range	-25°C ~ +85°C	—
Storage temp. & humidity range	-25°C ~ +85°C, 70% RH max.	—
Reflow soldering	1. More than 50% of the terminal electrode shall be covered with new solder. 	Preheat temperature : 165~185°C preheat time : 110±10sec max Solder temperature : 260°C soldering time : 10 sec.max (Reflow soldering profile)
Tensile strength (terminal strength)	1. No mechanical damage	
W	1.0 kgf	
Adhesion of terminal electrode (Flexure strength)	1. No mechanical damage	
a	1.0 mm	
b	0.8 mm	
c	1.3 mm	
W	2.0 kgf	
Thermal shock (Temperature cycle)	1. No mechanical damage 2. Leakage current : within 10μA	Step 1. -40±3°C 30±3min. Step 2. 85±3°C 30±3min. Number of cycle : 100 times
Heat load resistance	1. No mechanical damage 2. Leakage current : within 10μA	Temperature : 85±2°C Applied Voltage : working voltage Time : 1,000 hours Measured at room ambient temperature after placing for 24 hours
Humidity load resistance	1. No mechanical damage 2. Leakage current : within 10μA	Temperature : 40±2°C Humidity : 90~95%RH Applied voltage : Working Voltage Time : 500 hours Measured at room ambient temperature after placing for 24 hours

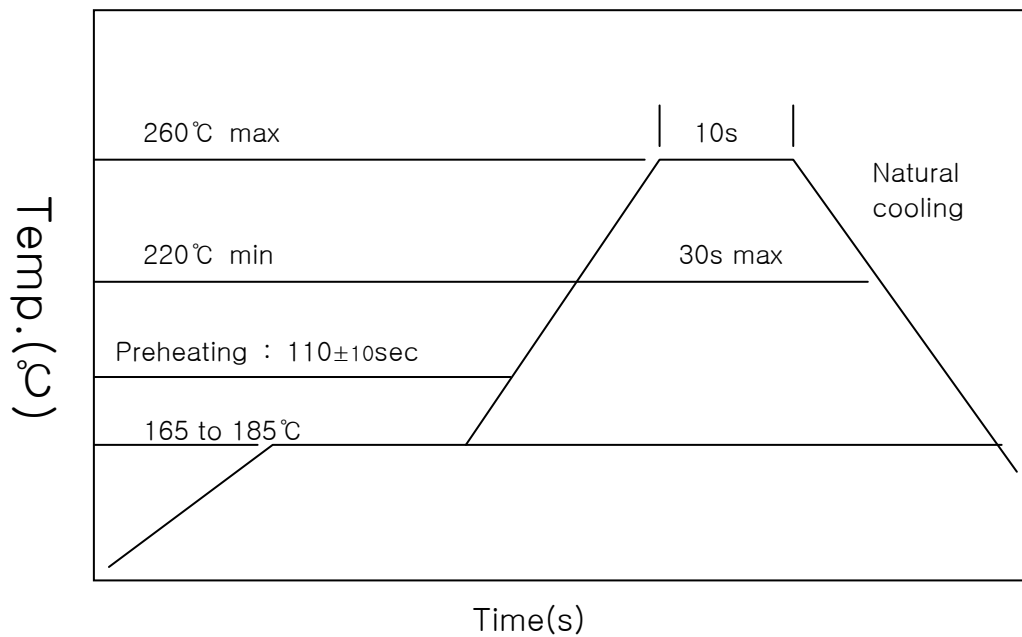
## Land Pattern & Reflow Soldering

### Land Pattern



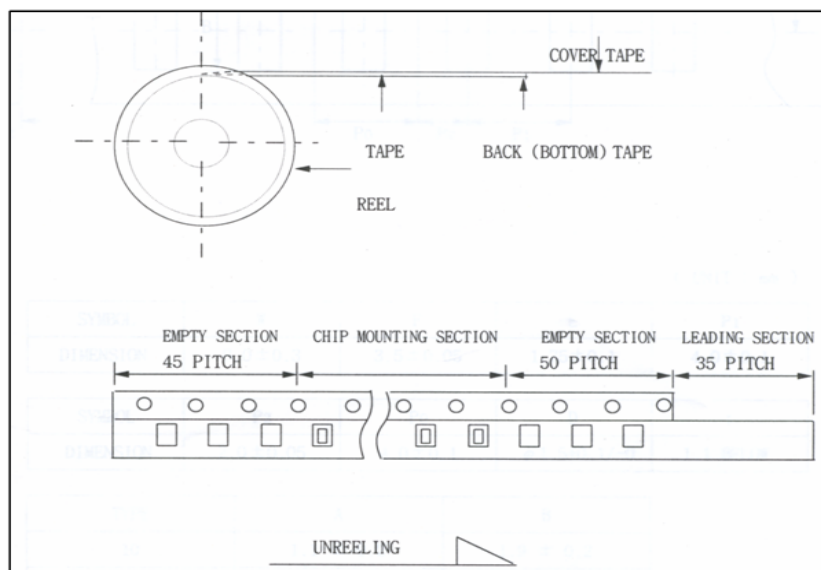
Size	a	b	c
0402	0.4~0.6	0.4~0.5	0.4~0.6
0603	0.7~0.9	0.7~0.8	0.6~0.8

### Reflow Soldering Profile



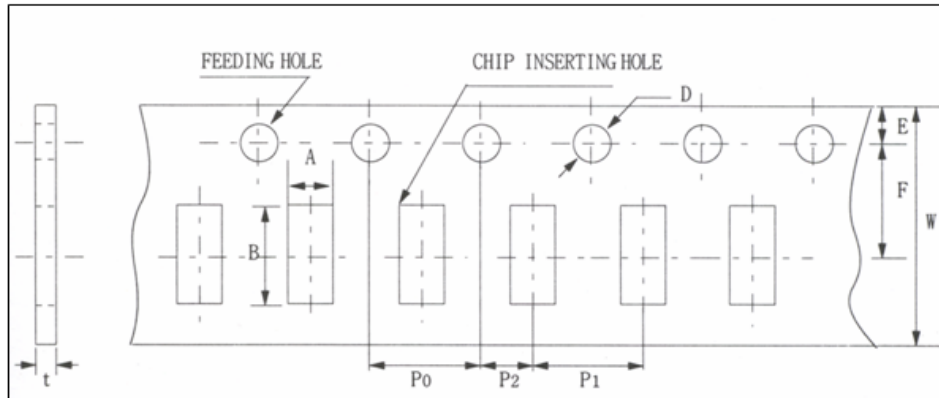
## Packing Specification

### Taping Figure



## Packing Specification

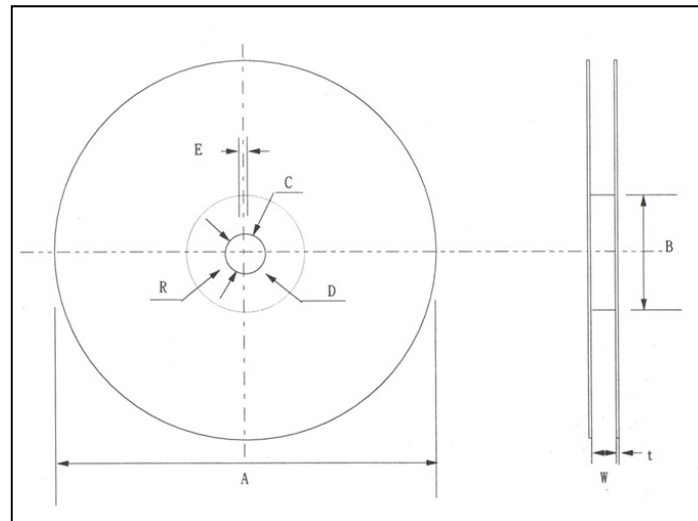
### Carrier Tape and Dimensions



Unit : mm

SYMBOL	A	B	W	F	E	P <sub>1</sub>	P <sub>2</sub>	P <sub>0</sub>	D	t
0402	0.65+0.05 -0.10	1.15+0.05 -0.10	8.0±0.3	3.5±0.05	1.75±0.1	2.0±0.05	2.0±0.05	4.0±0.1	1.5±0.1 -0	0.6±0.05
0603	1.10±0.2	1.90±0.2	8.0±0.3	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.5±0.1 -0	1.1 below

### Reel Dimensions



#### - Taping

- Standard Packing Quantity per Reel( $\phi 178$ )
- Paper Tape : 10,000 pcs /reel

#### -Reel Dimensions

Unit : mm

CODE	A	B	C	D
DIMENSION	$\phi 178 \pm 2$	Min. $\phi 50$	$\phi 13 \pm 0.5$	$\phi 21 \pm 0.8$
CODE	E	W	t	R
DIMENSION	2.0±0.5	10±1.5	0.8±0.2	1.0