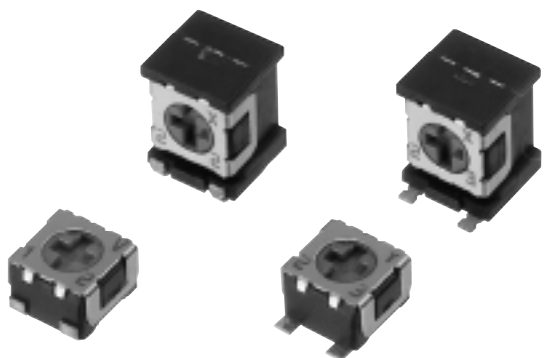
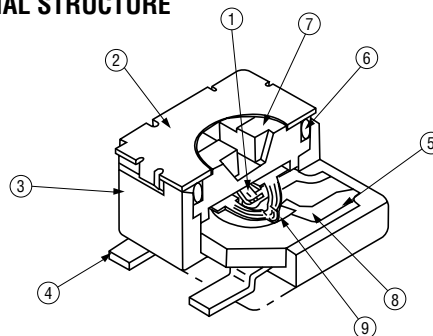




FEATURES

- Top and side adjustment styles
- Has a rotor with a cross slot for ease of adjustment
- Leaded terminals provide strong adhesive strength against P.C.B. bending
- J-hook, Gull wing and leaded terminal configurations
- Compatible with P.C.B. Pad Outline Dimensions for ST-3 series
- Sealed / Washable

INTERNAL STRUCTURE



	Part name	Material	Flammability
①	Wiper	Multi metal alloy	—
②	Cover	Stainless steel (SUS 304)	
③	Housing	Epoxy	UL-94V-0
④	Terminal	Copper alloy, Solder-plated	—
⑤	Base element	Ceramic	
⑥	“O” ring	Silicone rubber	UL-94HB
⑦	Rotor	PPS (Polyphenylenesulphide)	UL-94V-0
⑧	Electrode	Ag-Pd cermet	—
⑨	Resistive element	RuO ₂ cermet	

CFCs, Halon, Carbon tetrachloride and designated bromic flame retardant PBBs and PBBs are not used in our products.

PART NUMBER DESIGNATION

S T - 3 2		T A	1 0 0 Ω	(1 2)
Series name				Resistance code
Form of packaging				Resistance value
T : Taping (Reel)				
Blank : Bulk in vinyl bags				
Blank				
				Product shape (Shape of terminal)
				A, G : J-hook
				B, H : Gull wing

✳ Please refer to the LIST OF PART NUMBERS when placing orders.

ST-32

SURFACE MOUNT TYPE TRIMMERS

■ LIST OF PART NUMBERS

Adjustment position	Shape of terminal	Form of packaging	
		Taping (reel)	Vinyl bag
Top adjustment	A (J-hook)	ST-32TA	ST-32A
	B (Gull wing)	ST-32TB	ST-32B
Side adjustment	G (J-hook)	ST-32TG	ST-32G
	H (Gull wing)	ST-32TH	ST-32H
Pieces in package		500 pcs./reel	100 pcs./pack

■ ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 1 M Ω
Nominal resistance tolerance	$\pm 20\%$
Power ratings	0.125 W (70 °C) 0 W (125 °C)
Resistance law	Linear law
Maximum input voltage	DC200 V or power rating, whichever is smaller
Maximum wiper current	100 mA or power rating, whichever is smaller
Effective electrical angle	210 ° (1 turn)
End resistance	1 % or 2 Ω , whichever is greater
C.R.V.	1 % or 3 Ω , whichever is greater
Operating temp. range	-55 ~ +125 °C
Temp. coefficient	10 Ω ~ 50 Ω : ± 250 ppm/°C maximum 100 Ω ~ 1 M Ω : ± 100 ppm/°C maximum
Insulation resistance	1000 M Ω minimum (DC500 V)
Dielectric strength	AC500 V, 60 s
Net weight	Approx. 0.05 g (ST-32A, B) Approx. 0.11 g (ST-32G, H)

<Nominal resistance values>

10 Ω	20 Ω	50 Ω	100 Ω	200 Ω	300 Ω	500 Ω
1 k Ω	2 k Ω	3 k Ω	5 k Ω	10 k Ω	20 k Ω	30 k Ω
50 k Ω	100 k Ω	200 k Ω	500 k Ω	1 M Ω		

Fig.1

☞ : Semi-standard

* The above part numbers are all available with the respective combination of <Nominal resistance values> (Fig. 1).

* Verify the above part numbers when placing orders.

* Taping specification is not sold separately and must be purchased in reel units.

■ MECHANICAL CHARACTERISTICS

Mechanical angle	250 ° (1 turn)
Operating torque	5 mN·m {51 gf·cm} maximum
Stop strength	20 mN·m {204 gf·cm} minimum
Rotational life	100 cycles [$\Delta R/R \leq \pm (2\% + 3\%)$]
Thrust to rotor	5 N {0.51 kgf} minimum
Solderability	235 °C, 2 s
Shear (Adhesion)	5 N {0.51 kgf} 10 s
Substrate bending	Width 90 mm, bend 3 mm, 5 s, 1 time
Pull-off strength	5 N {0.51 kgf} 10 s

{ } : Reference only

■ ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Specifications
Thermal shock	-65 ~ +125 °C (0.5 h), 5 cycles	[$\Delta R/R \leq 2\%$] [S.S. $\leq 1\%$]
Humidity	-10 ~ +65 °C (80 ~ 98 %RH), 10 cycles, 240 h	[$\Delta R/R \leq 2\%$]
Shock	981 m/s ² , 6 ms 6 directions for 3 times each	[$\Delta R/R \leq 1\%$] [S.S. $\leq 1\%$]
Vibration	Amplitude of 1.52 mm or Acceleration of 196 m/s ² , 10 ~ 2000 Hz, 3 directions, 12 times each	
Load life	70 °C, 0.125 W 1000 h	[$\Delta R/R \leq 3\%$] [S.S. $\leq 1\%$]
Low temp. operation	-55 °C, 2 h	[$\Delta R/R \leq 2\%$] [S.S. $\leq 2\%$]
High temp. exposure	125 °C, 250 h	[$\Delta R/R \leq 3\%$] [S.S. $\leq 2\%$]
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering heat	260 °C, 10 s or 215 °C, 35 s	[$\Delta R/R \leq 1\%$]

$\Delta R/R$: Change in total resistance
S.S. : Setting stability

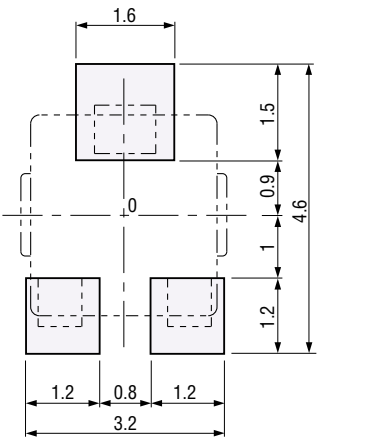
MAXIMUM INPUT RATINGS

Nominal resistance values (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
➡ 10	11	1.00	100
➡ 20	21	1.58	79.1
50	51	2.50	50.0
100	12	3.53	35.4
200	22	5.00	25.0
300	32	6.12	20.4
500	52	7.91	15.8
1 k	13	11.2	11.2
2 k	23	15.8	7.91
3 k	33	19.4	6.45
5 k	53	25.0	5.00
10 k	14	35.4	3.54
20 k	24	50.0	2.50
30 k	34	61.2	2.04
50 k	54	79.1	1.58
100 k	15	112	1.12
200 k	25	158	0.79
500 k	55	200	0.40
1 M	16	200	0.20

➡ : Semi-standard

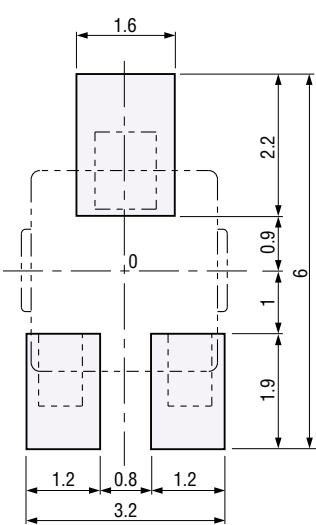
RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

ST-32A, G



For reflow soldering

ST-32B, H



(Unit : mm)

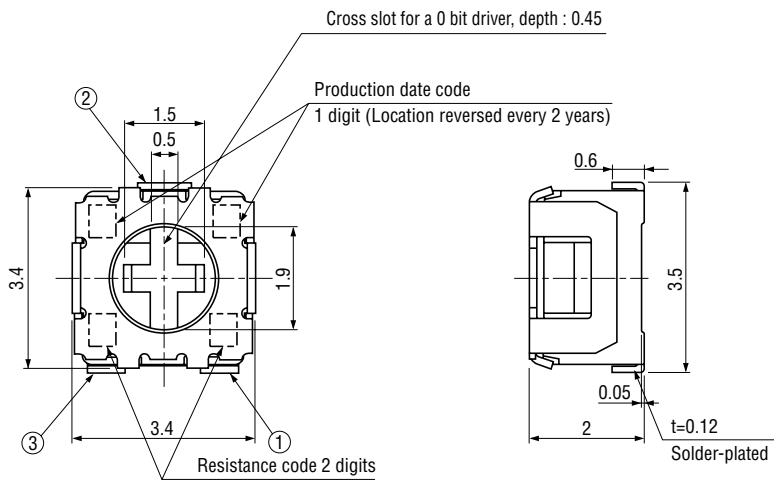
Note) The zero point is the center of mounting.

ST-32
SURFACE MOUNT TYPE TRIMMERS

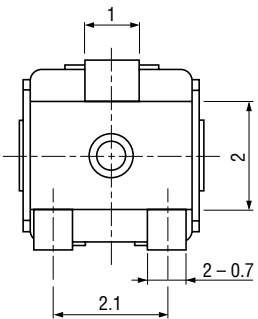
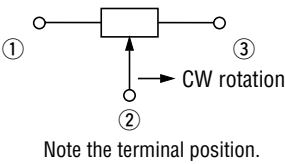
SURFACE MOUNT
TYPE TRIMMERS

OUTLINE DIMENSIONS

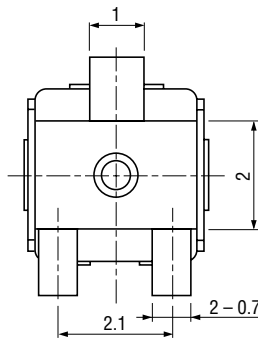
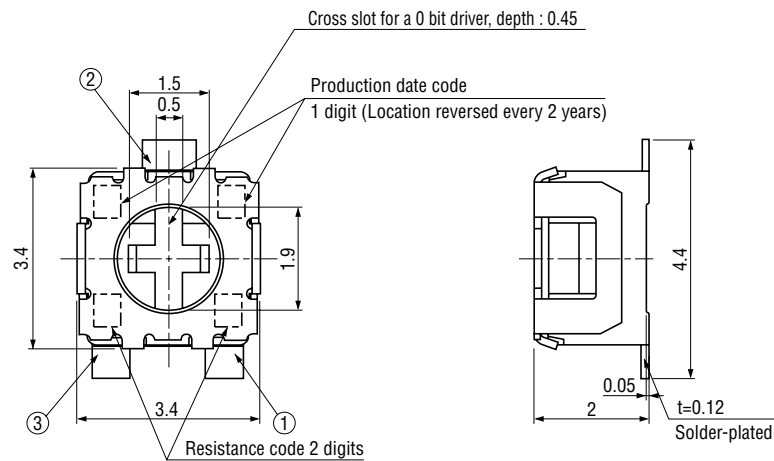
ST-32A
Top adjustment



Unless otherwise specified, tolerance : ± 0.3 (Unit : mm)

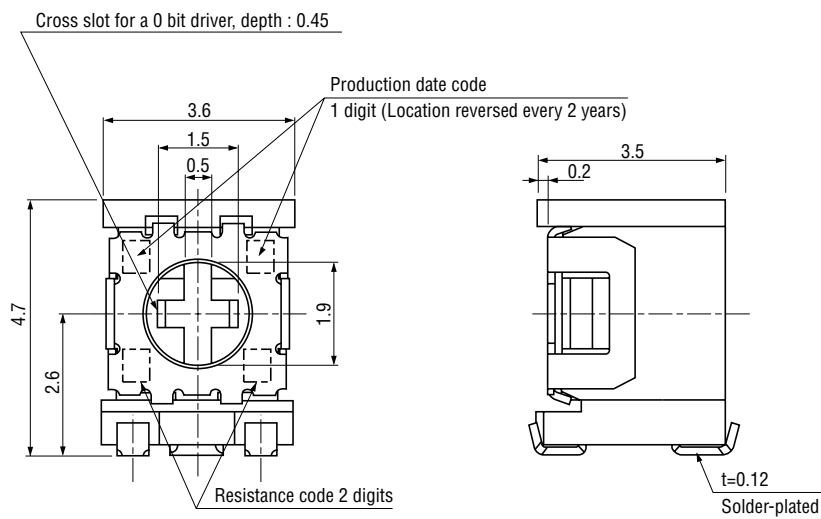


ST-32B
Top adjustment

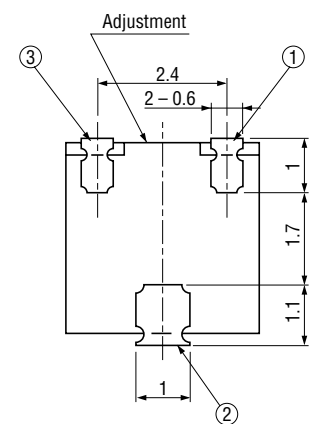
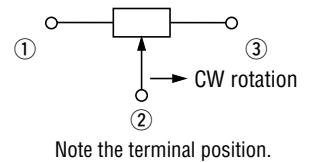


OUTLINE DIMENSIONS

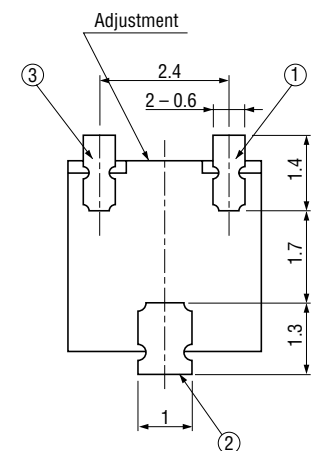
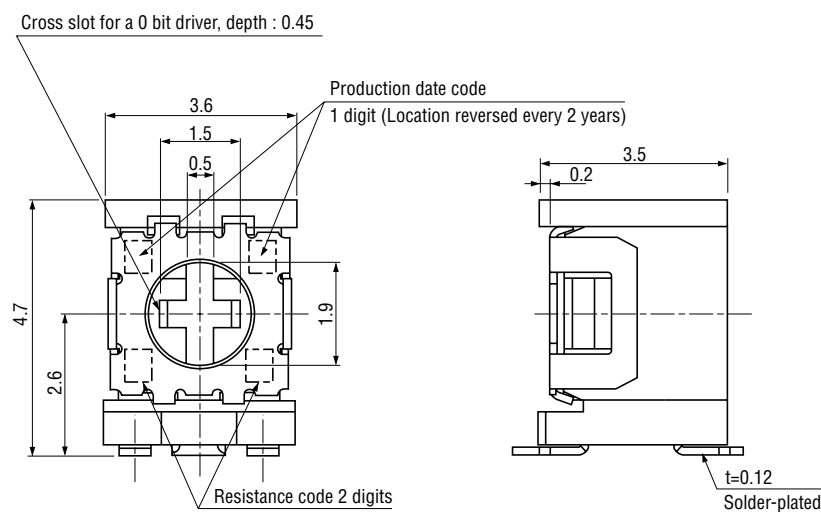
● ST-32G Side adjustment



Unless otherwise specified, tolerance : ± 0.3 (Unit : mm)



● ST-32H Side adjustment



ST-32

SURFACE MOUNT TYPE TRIMMERS

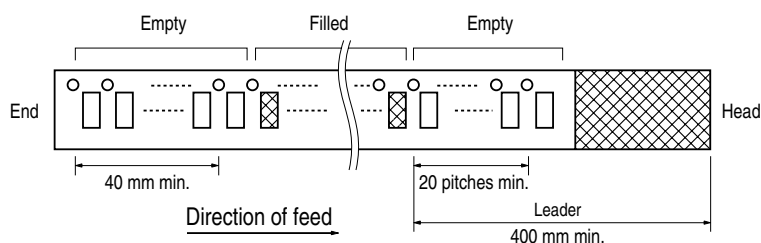
PACKAGING SPECIFICATIONS

<Taping packaging specifications>

- Taping version is packaged in 500 pcs. per reel.
Orders will be accepted for units of 500 pcs., i.e., 500, 1000, 1500 pcs., etc.
- ST-32TA and TB versions are boxed with 4 reels (2000 pcs.). ST-32TG and TH versions are boxed with one reel (500 pcs.).

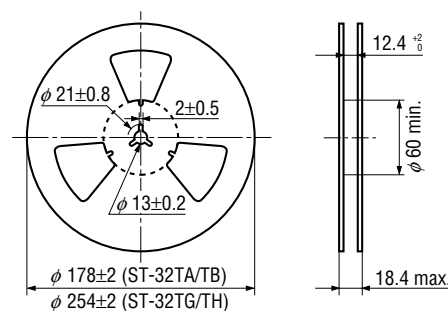
Maximum number of consecutive missing pieces=2
Leader length and reel dimension are shown in the diagrams below.

EMBOSSED TAPE DIMENSIONS



REEL DIMENSIONS

(Unit: mm)



Reel & embossed tape materials

Embossed tape: Plastic
Reel: Paper

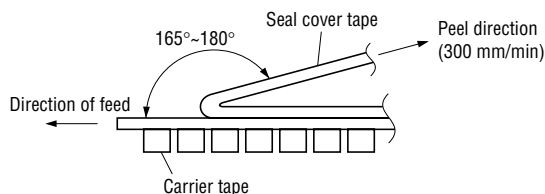
Embossed tape pull strength

9.8 N {1kgf} minimum

Peeling strength of seal tape

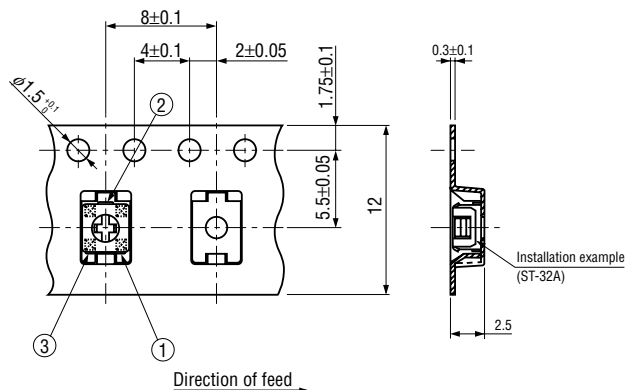
0.098~0.69 N {10~70gf}

Test method for peeling strength of seal tape

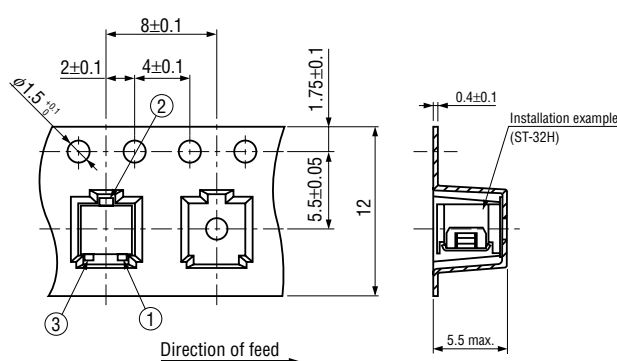


{ } : Reference only

ST-32TA, TB



ST-32TG, TH



<Vinyl bag packaging specifications>

- Unit of bulk in vinyl bag packaging is 100 pcs. per pack.
- Boxing of bulk in vinyl bags is performed with 500 pcs. per box.