



Common mode filters

For automotive signal line

ACT series

ACT45B type

ACT45B

[1812 inch]* (CAN-BUS)

* Dimensions Code JIS[EIA]

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

The storage period is less than 12 months. Be sure to follow the storage conditions (Temperature: 5 to 40°C, Humidity: 10 to 75% RH or less).

If the storage period elapses, the soldering of the terminal electrodes may deteriorate.

Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).

Before soldering, be sure to preheat components.

The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.

Soldering corrections after mounting should be within the range of the conditions determined in the specifications.

If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.

Common mode filters

For automotive signal line

Product compatible with RoHS directive

Compatible with lead-free solders

AEC-Q200

Overview of ACT45B type

FEATURES

- Compatible with an operating temperature range of -40 to $+150^{\circ}\text{C}$, so can be used for vehicle devices requiring compatibility with high temperatures.
- When mounting, the terminal and winding tape splicing part do not fuse.

APPLICATION

- CAN-BUS, FAXs, modems, ISDNs, etc.

PART NUMBER CONSTRUCTION


ACT45B	-	110	-	2P	-	TL	-	003
Series • Type name		Inductance(typ.) (μH)		Number of lines		Packaging style		Internal code
		110	11	2P	2 lines	TL	ϕ 330mm reel	
		220	22					
		510	51					
		101	100					

OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

Type	Temperature range		Package quantity (pieces/reel)	Individual weight (g)
	Operating temperature ($^{\circ}\text{C}$)	Storage temperature* ($^{\circ}\text{C}$)		
ACT45B	-40 to $+150$	-40 to $+150$	2,500	0.14

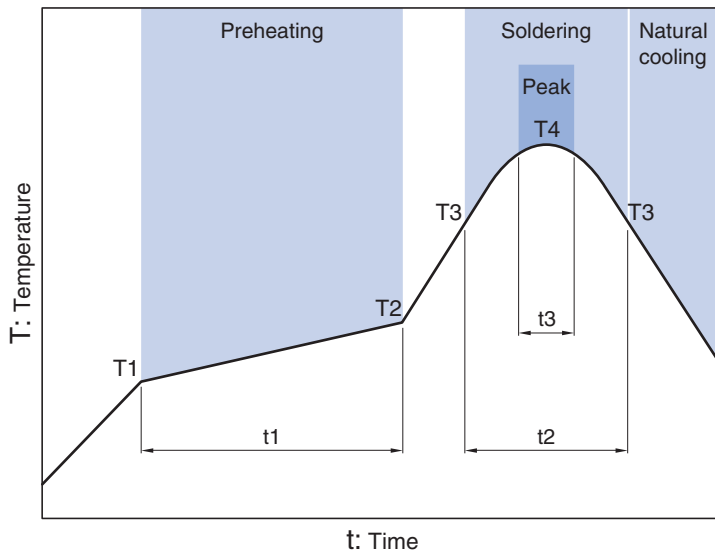
* The Storage temperature range is for after the circuit board is mounted.

○ RoHS Directive Compliant Product: See the following for more details.<https://product.tdk.com/info/en/environment/rohs/index.html>

 Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.
Please note that the contents may change without any prior notice due to reasons such as upgrading.

ACT45B type

RECOMMENDED REFLOW PROFILE



Preheating			Soldering		Peak	
Temp.	Temp.	Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	40s max.	245°C	5s

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■ SHAPE & DIMENSIONS



RECOMMENDED LAND PATTERN

CIRCUIT DIAGRAM Dimensions in mm Dimensions in mm 12

3• No polarity

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ACT45B type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

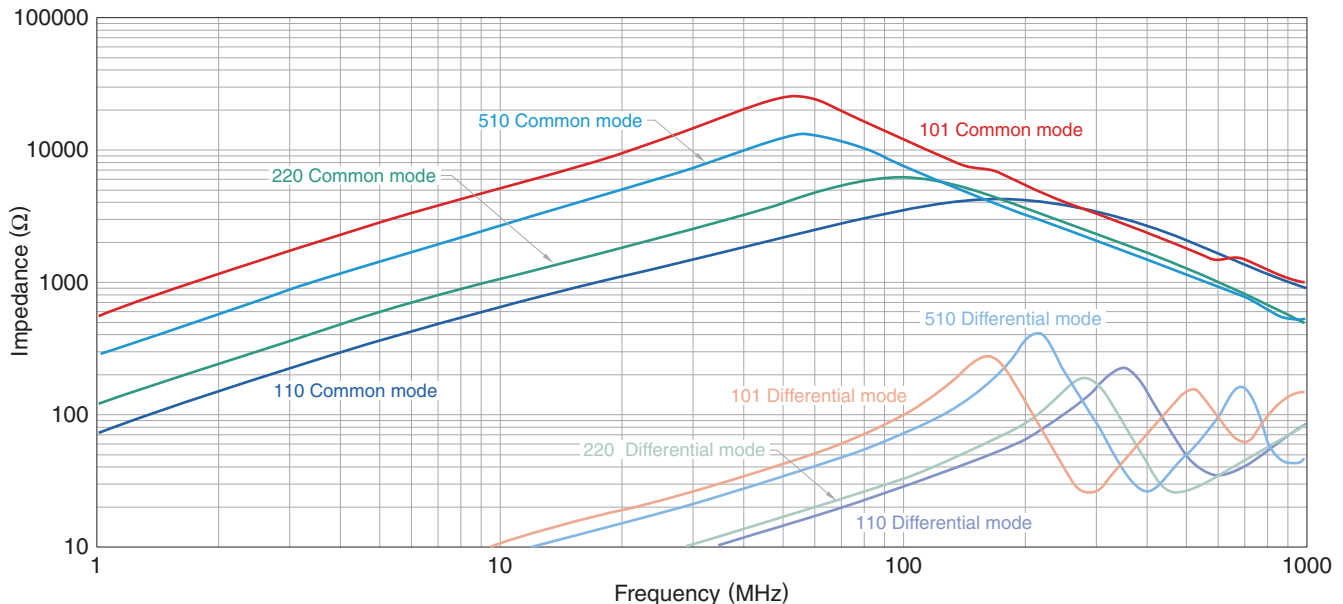
Common mode impedance		Common mode inductance		Stray inductance	DC resistance	Rated current	Insulation resistance	Rated voltage	Part No.
[10MHz]		[100kHz]		[100kHz]					
(Ω)min.	(Ω)typ.	(μ H)+50/-30%	(μ H)typ.	(μ H)typ.	(Ω)max.	(A)max.	(M Ω)min.	(V)max.	
300	600	11	0.05	0.05	0.6	0.25	10	50	ACT45B-110-2P-TL003
500	1200	22	0.08	0.08	1.0	0.2	10	50	ACT45B-220-2P-TL003
1000	2800	51	0.15	0.15	1.0	0.2	10	50	ACT45B-510-2P-TL003
2000	5800	100	0.20	0.20	2.0	0.15	10	50	ACT45B-101-2P-TL003

Measurement equipment

Measurement item	Product No.	Manufacturer
Common mode impedance	4991A	Keysight Technologies
Common mode inductance	4294A	Keysight Technologies
DC resistance	4338A	Keysight Technologies
Insulation resistance	4339A	Keysight Technologies

* Equivalent measurement equipment may be used.

IMPEDANCE VS. FREQUENCY CHARACTERISTICS



Measurement equipment

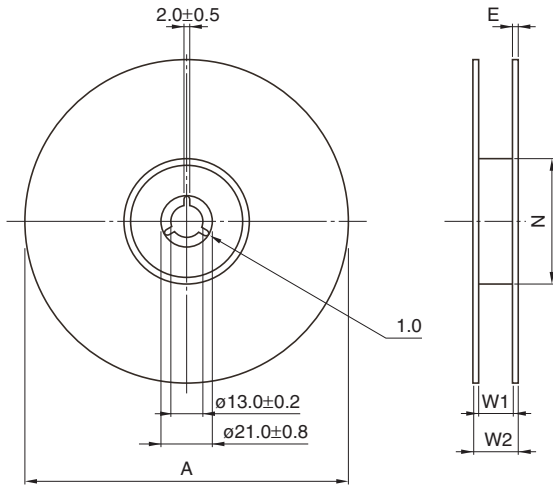
Product No.	Manufacturer
4991A	Keysight Technologies

* Equivalent measurement equipment may be used.

ACT45B type

PACKAGING STYLE

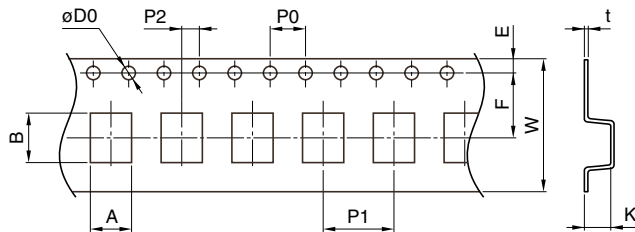
REEL DIMENSIONS



Type	A	W1	W2	N	E
ACT45B	$\phi 330 \pm 2$	13.5 ± 0.5	17.5 ± 1	100 ± 1	2 typ.

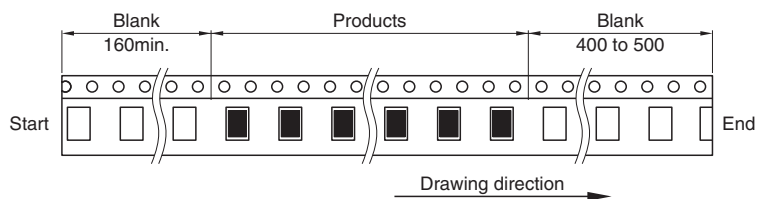
Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Type	A	B	$\phi D0$	E	F	P0	P1	P2	W	K	t
ACT45B	3.6 ± 0.1	4.9 ± 0.1	1.55 ± 0.05	1.75 ± 0.1	5.5 ± 0.05	4.0 ± 0.1	8.0 ± 0.1	2.0 ± 0.05	12.0 ± 0.2	3.05 ± 0.1	0.3 ± 0.05



Dimensions in mm

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TDK:](#)

[ACT45B-101-2P-TL003](#) [ACT45B-510-2P-TL003](#) [ACT45B-220-2P-TL003](#) [ACT45B-110-2P-TL003](#)