Part Numbering System – Organic Conductive Polymer (OP-CAP)

Product Code Guide Carrier OCV series 82µF 16V +20% 8φ×6.7L General Purpose Tape **OCV** 820 1C TR 0807 Μ **(4)** (9) (1) (2) 3 (5) **(6**) (7)(8) Package Capacitance Rated Series Capacitance Terminal Case Size Application Supplement Code Tolerance Voltage Туре

- ① Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank. When the series name has 4 letters, use the following series codes. OCVZ→OVZ; OCVU→OVU
- ② Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10µF.

Example:	Capacitance	6.8	10	47	100	470	1,000	2,200
	Part number	6R8	100	470	101	471	102	222

③ Tolerance:

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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4 **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	2	2.5	4	6.3	10	16	20	25	35
Code	0D	0E	0G	0J	1A	1C	1D	1E	1V

⑤ Package:

SMD Type	TR = Reel package TT = Reel package of plastic	Radial Type	BK = Bulk Package SA = Straight Leader Taping CC = Cutting Leader
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6 Terminal (SMD) / Rubber type (Radial):

5

Note: For radial type: the case sizes of 5 ϕ , 6.3 ϕ ×5.5 ~ 8L and 8 ϕ ×8L are used flat rubber bung is the standard design, use a hyphen, " - ":

⑦ Case size: The first two digits indicate case diameter and the last two digits indicate case length in mm. SMD Type

φD×L	5×4.4	5×5.7 5×5.8	6.3×4.4	6.3×5.8 6.3×5.9	6.3×6.4 6.3×7.0	6.3×7.7	6.3×9.5
Code	0504	0506	0604	0606	0607	0608	0610
						10	
$\phi D imes L$	8×6.7	8×7.7	8×10	8×12	10×7.7	10× 9.9 10× 10	10×12.6
Code	0807	0808	0810	0812	1008	1010	1013

Radial Type

φD×L	5×8	6.3×5.5	6.3×6 6.3×6.5	6.3×8	6.3×11	8×6.5	8×8	8×11.5
Code	0508	0605	0606	0608	0611	0807	0808	0811
φD×L	8×12	8×16	8×20	10×10	10×12	10×16	10×20	
Code	0812	0816	0820	1010	1012	1016	1020	

8 Application:

None = General purpose

* When a supplement code following a blank digit code of Pb-free leader and coated case (standard design), use a hyphen, " - ", to fill the blank digit. When the automotive control code is required, please contact with us for further discussion.

Part Numbering System – Conductiv Polymer Hybrid

Product Code Guide Carrier HBV series 470µF ±20% 16V Automotive $10\phi \times 10L$ Tape **HBV** 471 1010 1C TR K Μ (9) 1 2 (3) (4) (5) **(6)** (7)(8) Capacitance Rated Package Series Capacitance Terminal Case Size Application Supplement Code Tolerance Voltage Туре 1 Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank. 2 Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10µF. 47 56 100 470 560 Example: Capacitance 10 Part number 100 470 560 471 561 101 ③ Tolerance: K = -10% ~ +10% M = -20% ~ +20% V = -10% ~ +20% 4 Rated Voltage: Rated voltage in volts (V) is represented by a two-digit code. Rated Voltage (V) 16 25 35 50 63 80 Code 1C 1E 1V 1H 1J 1K ⑤ Package: TR = Reel package SMD Type TT = Reel package of plastic BK = Bulk Package Radial Type SA = Straight Leader Taping CC = Cutting Leader 6 Terminal (SMD) / Rubber type (Radial): - = Standard product A = For application 10G ("A" must be used with automotive control code "K" together) SMD Type V = Anti-vibration structure Radial Type - = Standard product (used flat rubber bung) ⑦ Case size: The first two digits indicate case diameter and the last two digits indicate case length in mm. 6.3×7.7 10×10 10×12.5 10×16.5 $\phi D \times L$ 6.3×5.8 8×10 SMD Туре 0608 1016 Code 0606 0810 1010 1013 φD×L 6.3×6 6.3×8 8×10 10×10 10×12 Radial Туре 0608 Code 0606 0810 1010 1012 8 Application: None = General Purpose K = Automotive (AEC-Q200) When a supplement code following a blank digit code of Pb-free leader and coated case (standard design), use a hyphen, - ", to fill the blank digit. * When the automotive control code is required, please contact with us for further discussion.

9 Supplement code (Optional): For special control purposes

Hybrid

Part Numbering System - SMD Type

Product Code Guide



① Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

② Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10µF.

Example:	Capacitance	0.47	1	4.7	10	47	100	470	1,000	4,700
	Part number	R47	010	4R7	100	470	101	471	102	472

③ Tolerance:

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%]

(4) Rated voltage: Rated voltage in volts (V) is represented by a two-digit code.

		0		· ·			,	0							
Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
Code	0G	0J	1A	1C	1E	1V	1H	1J	2A	2C	2D	2E	2V	2G	2W

5 Package:

TR	Reel package
TT	Reel package of plastic
T-	Tray package for case diameter 12.5 ~ 18 mm

6 Terminal:

-	Standard product
А	For application 10G ("A" must be used with automotive control code "K" together)
V	Anti-vibration structure

⑦ Case size: The first two digits indicate case diameter and the last two digits indicate case length in mm.

$\phi D imes L$	4×4.5	4×5.3	4×5.7 4×5.8 ^{*1}	5×4.5	5×5.3	5×5.7 5×5.8 ^{*1}	5×7 ^{*2}	6.3×4.5	6.3×5.3
Code	0404	0405	0406	0504	0505	0506	0507	0604	0605
φD×L	6.3×5.7 6.3×5.8 ^{*1}	6.3×7.0 ^{*2}	6.3×7.7	6.3×8.7 ^{*2}	8×6.5	8×10	10×7.7	10×10	10×12.5
Code	0606	0607	0607	0608	0806	0810	1008	1010	1013
$\phiD imesL$	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5			
Code	1313	1316	1616	1621	1816	1821			

Note: ^{*1}: The case size are for VZL, VZS, VZT series only.

*2: The case size are for VZR series only.

When a case size is required and not shown in the table, please contact with us for further discussion.

8 Application:

None = General Purpose	K = Automotive (AEC-Q200)	
* When a supplement code following a blank digit code of I	² b-free leader and coated case (standard design), use a hy	phen,
" - ", to fill the blank digit.		

* When the automotive control code is required, please contact with us for further discussion.

(9) Supplement code (Optional):

For special control purposes

Part Numbering System - Radial Type

Product Code Guide



- ① Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.
- ② Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10µF.

Example:	Capacitance	0.47	1	4.7	10	47	100	470	1,000	4,700	10,000
	Part number	R47	010	4R7	100	470	101	471	102	472	103

③ Tolerance:

K = -10% ~ +10%	$M = -20\% \sim +20\%$	$V = -10\% \sim +20\%$
10/0 10/0	101 2070 2070	10/0 20/0

(4) **Rated voltage:** Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	4	6.3	10	16	25	35	50	63	100
Code	0G	0J	1A	1C	1E	1V	1H	1J	2A
Rated Voltage (V)	160	200	250	350	400	420	450		
Code	2C	2D	2E	2V	2G	2P	2W		

(5) Lead configuration and package (Please refer to page 6 ~ 7):

BK = Bulk Package	TA = Formed Lead Taping
FC = Formed & Cut Lead	SA = Straight Lead Taping
CC = Cut Lead	SD = Bent Cathode Lead
SF = Snap-in & Formed Cut Lead	BC = Bent & Cut Lead (Leads in Right Direction)
SC = Snap-in & Cut Lead	BU = Bent & Cut Lead (Leads in Left Direction)

6 Rubber type:

– = Gas escape type F = Flat rubber bung

⑦ Case size: The first two digits indicate case diameter and the last two digits indicate case length in mm.

4×5	4×7	5×5	5×7	5×11	6.3×5	6.3×7	6.3×11	6.3×15	8×5	8×7	8×9	8×11.5	8×15
0405	0407	0505	0507	0511	0605	0607	0611	0615	0805	0807	0809	0811	0815
8×20	10×9	10×10	10×12.5	10×16	10×20	10×25	10×30	10×35	10×40	10×45	10×50	12.5×16	12.5×20
0820	1009	1010*	1012	1016	1020	1025	1030	1035	1040	1045	1050	1316	1320
10 5 05	10 5 00	10 5 05	10 5 10	10 5 15	10 5 50	10 10	40.00	40.05	10.01 5	40.05.5	10 10	40.45	40.50
12.5×25	12.5×30	12.5×35	12.5×40	12.5×45	12.5×50	16×16	16×20	16×25	16×31.5	16×35.5	16×40	16×45	16×50
1325	1330	1335	1340	1345	1350	1616	1620	1625	1632	1636	1640	1645	1650
		I	1	I	1	1	1	1	1	1		1	
18×16	18×20	18×25	18×31.5	18×35.5	18×40	18×45	18×50	22×40	22×45	25×40	25×45		
1816	1820	1825	1832	1836	1840	1845	1850	2240	2245	2540	2545		
	4×5 0405 8×20 0820 12.5×25 1325 18×16 1816	4×5 4×7 0405 0407 8×20 10×9 0820 1009 12.5×25 12.5×30 1325 1330 18×16 18×20 1816 1820	4×5 4×7 5×5 0405 0407 0505 8×20 10×9 10×10 0820 1009 1010* 12.5×25 12.5×30 12.5×35 1325 1330 1335 18×16 18×20 18×25 1816 1820 1825	4×5 4×7 5×5 5×7 0405 0407 0505 0507 8×20 10×9 10×10 10×12.5 0820 1009 1010* 1012 12.5×25 12.5×30 12.5×35 12.5×40 1325 1330 1335 1340 18×16 18×20 18×25 18×31.5 1816 1820 1825 1832	4×5 4×7 5×5 5×7 5×11 0405 0407 0505 0507 0511 8×20 10×9 10×10 10×12.5 10×16 0820 1009 1010* 1012 1016 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 1325 1330 1335 1340 1345 18×16 18×20 18×25 18×31.5 18×35.5 1816 1820 1825 1832 1836	4×5 4×7 5×5 5×7 5×11 6.3×5 0405 0407 0505 0507 0511 0605 8×20 10×9 10×10 10×12.5 10×16 10×20 0820 1009 1010* 1012 1016 1020 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 1325 1330 1335 1340 1345 1350 18×16 18×20 18×25 18×31.5 18×40.5 18×40.5	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 0405 0407 0505 0507 0511 0605 0607 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 0820 1009 1010* 1012 1016 1020 10×25 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 1325 1330 1335 1340 1345 1350 1616 18×16 18×20 18×25 18×31.5 18×35.5 18×40 18×45 1816 1820 1825 1832 1836 1840 1845	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 0405 0407 0505 0507 0511 0605 0607 0611 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 0820 1009 1010* 1012 1016 1020 1025 1030 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 16×20 1325 1330 1335 1340 1345 1350 1616 16×20 18×16 18×20 18×25 18×31.5 18×35.5 18×40 18×45 18×50 1816 1820 1825 1832 1836 1840 1845 18×50	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 0405 0407 0505 0507 0511 0605 0607 0611 0615 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 0820 1009 1010* 1012 1016 1020 1025 10×30 10×35 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 16×20 16×25 1325 1330 1335 1340 1345 1350 1616 16×20 16×25 18×16 18×20 18×25 18×31.5 18×35.5 18×40 18×45 18×50 22×40 1816 1820 1825 1832 1836 1840 1845 1850 22×40	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 8×5 0405 0407 0505 0507 0511 0605 0607 0611 0615 0805 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 0820 1009 1010* 1012 1016 1020 1025 10×30 10×35 10×40 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 16×20 16×25 16×31.5 1325 1330 1335 1340 1345 1350 1616 1620 16×25 16×31.5 18×16 18×20 18×25 18×31.5 18×35.5 18×40 18×45 18×50 22×40 22×45 1816 1820 1825 1832 1836 1840 1845 1850 2240 22×45	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 8×5 8×7 0405 0407 0505 0507 0511 0605 0607 0611 0615 0805 0807 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 10×45 0820 1009 1010* 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 10×45 0820 1009 1010* 1012 1016 1020 10×25 10×30 10×35 10×40 10×45 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 16×20 16×31.5 16×35.5 1325 1330 1335 1340 1345 1350 1616 1620 16×25 16×31.5 16×35.5 18×16 18×20 18×25 18×35.5 18×40 18×55 18×50	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 8×5 8×7 8×9 0405 0407 0505 0507 0511 0605 0607 0611 0615 0805 0807 0809 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 10×45 10×50 0820 1009 1010* 1012 1016 1020 1025 1030 1035 10×40 10×45 10×50 12.5×25 12.5×30 12.5×35 12.5×40 12.5×45 12.5×50 16×16 16×20 16×25 16×31.5 16×35.5 16×40 12.5×25 12.5×30 12.5×35 12.5×40 12.5×50 16×16 16×20 16×25 16×31.5 16×35.5 16×40 1325 1330 1335 1340 1345 1350 1616 1620 1625 1632.5 16×40 18×16 18×20 18×31.5 18×35.5 18×40 18×45 18×50 22×40 <td< td=""><td>4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 8×5 8×7 8×9 8×11.5 0405 0407 0505 0507 0511 0605 0607 0611 0615 0805 0807 0809 0811 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 10×45 10×50 12.5×16 0820 1009 1010* 1012 1016 1020 1025 1030 1035 10×40 10×45 10×50 12.5×16 0820 1009 1010* 1012 1016 1020 1025 1030 1035 10×40 10×45 12.5×16 12.5×25 12.5×30 12.5×40 12.5×45 12.5×50 16×16 16×20 16×315 16×35.5 16×40 16×45 1325 1330 1335 1340 1345 1350 1616 1620 1625 16×35</td></td<>	4×5 4×7 5×5 5×7 5×11 6.3×5 6.3×7 6.3×11 6.3×15 8×5 8×7 8×9 8×11.5 0405 0407 0505 0507 0511 0605 0607 0611 0615 0805 0807 0809 0811 8×20 10×9 10×10 10×12.5 10×16 10×20 10×25 10×30 10×35 10×40 10×45 10×50 12.5×16 0820 1009 1010* 1012 1016 1020 1025 1030 1035 10×40 10×45 10×50 12.5×16 0820 1009 1010* 1012 1016 1020 1025 1030 1035 10×40 10×45 12.5×16 12.5×25 12.5×30 12.5×40 12.5×45 12.5×50 16×16 16×20 16×315 16×35.5 16×40 16×45 1325 1330 1335 1340 1345 1350 1616 1620 1625 16×35

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

8 Application:

None = General Purpose

K = Automotive (AEC-Q200)

* When a supplement code following a blank digit code of Pb-free leader and PET sleeve (standard design), use a hyphen,

" - ", to fill the blank digit. When the automotive control code is required, please contact with us for further discussion.

Note: For case sizes of $3\phi \times 5L$, $12.5\phi \times 16L$, $16\phi \times 16L$, $16\phi \times 20L$, $18\phi \times 20L$, $18\phi \times 20L$, $18\phi \times 25L$ which used flat rubber bung is the standard design, use a hyphen, " - ".

Part Numbering System - Snap-in Type

Product Code Guide



① Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

2 Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure.

Example:	Capacitance	100	470	820	1,000	4,700	6,800	10,000	15,000
	Part number	101	471	821	102	472	682	103	153

③ Tolerance:

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%
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(4) Rated voltage: Rated voltage in volts (V) is represented by a two-digit code.

Rated Voltage (V)	16	25	35	50	63	80	100			
Code	1C	1E	1V	1H	1J	1K	2A			
Rated Voltage (V)	160	180	200	250	315	350	400	420	450	500
Code	2C	2S	2D	2E	2F	2V	2G	2P	2W	2H

(5) Terminal type (Refer to page 14):

Terminal type(pins)	2 (Standard)	3	4	5	Vibration- resistant	Horiz Mou	ontal nting
Terminal code		L3	L4	L5	T2	H2	G2

6 Terminal length:

Terminal length(mm)	4.0	6.3
Terminal code	A	-

⑦ Case size: The first two digits indicate case diameter in mm. The last two digits indicate case length in mm.

			0						0			0		
φD×L	20×15	20×20	20×25	20×30	20×35	20×40	20×45	20×50	22×15	22×20	22×25	22×30	22×35	22×40
Code	2015	2020	2025	2030	2035	2040	2045	2050	2215	2220	2225	2230	2235	2240
$\phi D \times L$	22×45	22×50	22×55	22×60	25×15	25×20	25×25	25×30	25×35	25×40	25×45	25×50	25×55	25×60
Code	2245	2250	2255	2260	2515	2520	2525	2530	2535	2540	2545	2550	2555	2560
	1	I	1	1	1	I	1	1	T	I	I.	1	1	
$\phi D \times L$	30×15	30×20	30×25	30×30	30×35	30×40	30×45	30×50	30×55	30×60	30×65	35×15	35×20	35×25
Code	3015	3020	3025	3030	3035	3040	3045	3050	3055	3060	3065	3515	3520	3525
φD×L	35×30	35×35	35×40	35×45	35×50	35×60	35×70	35×80	35×90	35×100	40×25	40×30	40×35	40×40
Code	3530	3535	3540	3545	3550	3560	3570	3580	3590	35A0	4025	4030	4035	4040
		1				1			1	1	1			
φD×L	40×45	40×50	40×55	40×60	40×65	40×70	40×80	40×90	40×100	45×70	45×80	45×90		
Code	4045	4050	4055	4060	4065	4070	4080	4090	40A0	4570	4580	4590	1	
		!	and the state of the second	and the set	the second star	41				. f	Bar		-	

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

8 Application / Additonal:

None = General Purpose	K = Automotive (AEC-Q200)
N = No bottom insulation	C = Nano carbon coating insulation

* When a supplement code following a blank digit code of Pb-free terminal and PET sleeve (standard design), use a hyphen, " - ", to fill the blank digit. When the bottom insulation plate is not required or a rilled construction is necessary, please consult with us.

Part Numbering System - Screw Type

Product Code Guide



① Series: Series is represented by a three-letter code. When the series name only has two letters, use a hyphen, "-", to fill the third blank.

(2) Capacitance: Capacitance in µF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under 10µF.

Example:	Capacitance	100	470	820	1,000	4,700	6,800	10,000	15,000	47,000
	Part number	101	471	821	102	472	682	103	153	473

③ Tolerance:

K = -10% ~ +10%	M = -20% ~ +20%	V = -10% ~ +20%

④ Rated voltage:

Rated voltage in volts (V) is represented by a two-digit code.

5	· ·				•					
Rated Voltage (V)	10	16	25	35	50	63	80	100		
Code	1A	1C	1E	1V	1H	1J	1K	2A		
r			r.		r.	r.	r.	r.		r.
Rated Voltage (V)	160	200	250	315	350	400	420	450	500	525
Code	2C	2D	2E	2F	2V	2G	2P	2W	2H	2Y

⑤ Case type:

•••	
- = Mounting clamp + Plain case	N = Mounting clamp + Rilled case
X = Plain case	R = Rilled case
S = Stud bottom case + Plain case	H = Stud bottom case + Rilled case
$I =$ Mounting clamp with 2 footed + Plain case (Only suit for $\phi D \ge 51$ mm)	

6 Terminal type:

Terminal Type	Post Diameter (mm)	Height (±1 mm)	For Case Diameters	Code
M5 Post, Small	8	6.5	35	Α
M5 Post	10	6.5	51 ~ 89	-
M5 Post, High Current	17.4	6.5	76.2 ~ 89	С
M6 Post, High Current	17.4	6.5	76.2 ~ 89	D

⑦ Case size: The first one digit indicates case diameter and the last three digits indicate case length in mm.

φD×L	35×53	35×65	35×75	35×83	35×100	35×121	51×75	51×83	51×96	51×100	51×115
Code	A053	A065	A075	A083	A100	A121	B075	B083	B096	B100	B115
	1	1		1	1	1	1	1			1
φD×L	51×121	51×130	63.5×96	63.5×100	63.5×115	63.5×121	63.5×130	63.5×144	76.2×96	76.2×115	76.2×121
Code	B121	B130	C096	C100	C115	C121	C130	C144	D096	D115	D121
		Г Г	1	1	Г Г	Г Г	Г Г	1			•
φD×L	76.2×130	76.2×144	76.2×155	89×130	89×157	89×196	89×236				
Codo	D120	D144	D155	E420	E457	E106	E226	1			

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

8 Application / Additional

None = General purpose

* When a supplement code following a blank digit code of Pb-free terminal and PVC sleeve (standard design), use a hyphen, " - ", to fill the blank digit.