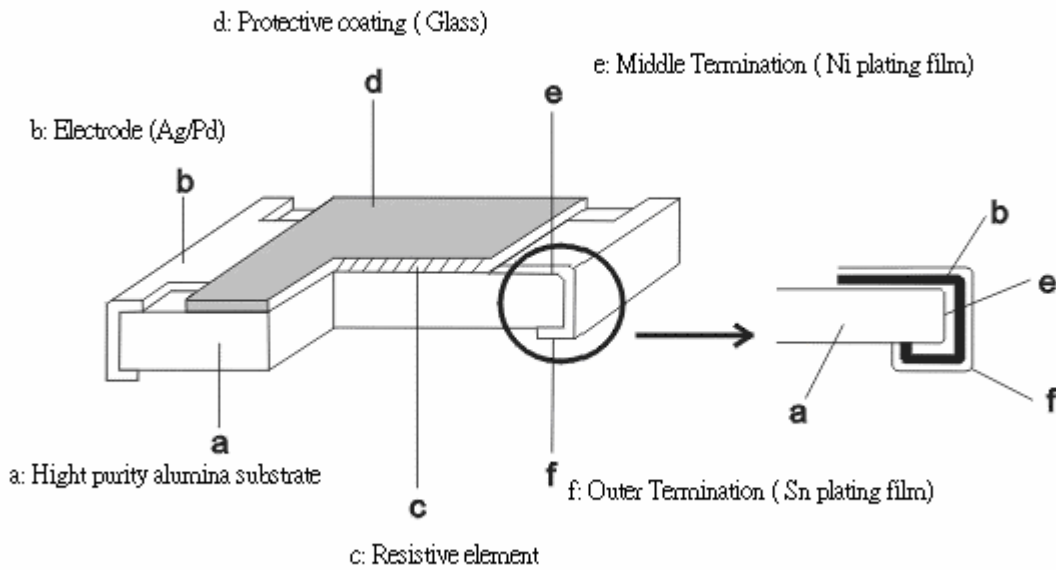


Thick film Low ohm Chip Resistor

低阻值厚膜貼片電阻

CONSTRUCTION: 結構圖



APPLICATION

- ✧ Entertainment :stereo ,TV tuners, tape recorder
- ✧ Appliance : Air condition , refrigerator
- ✧ Computer & relative products : Main board ,PDA
- ✧ Communication equipment : cell phone Fax machine
- ✧ Power equipment :power supply ,I Jumination equipment
- ✧ Measuring instrument : Electric meter, Navigation equipment

FEATURES

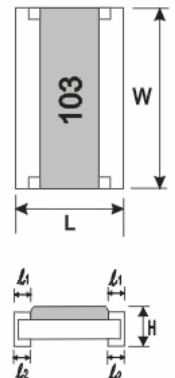
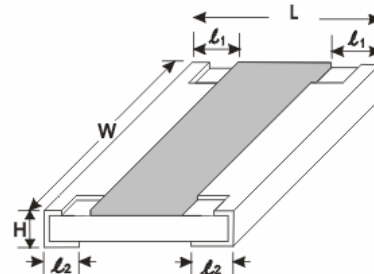
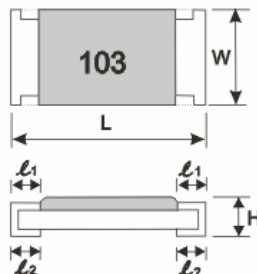
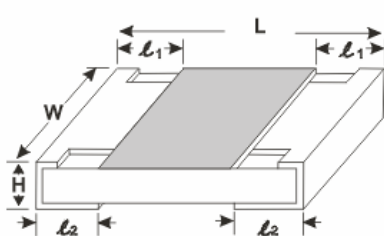
- ✧ Small size and light weight.
- ✧ Reduction of assembly costs and matching with placement machines.
- ✧ Reliability High quality and Fast delivery
- ✧ Suitable for both re-flow soldering and flow soldering.

SCR01(0201) SCR05(0805) SCR18(1812)

SCR32 (1812)

SCR02(0402) SCR06(1206) SCR20(2010)

SCR03(0603) SCR12(1210) SCR25(2512)



DIMENSION

規格尺寸

Unit : mm

TYPE	L	W	H	l_1	l_2
SCR01(0201)	0.60±0.03	0.30±0.03	0.23±0.05	0.15±0.05	0.15±0.05
SCR02(0402)	1.00±0.10	0.50±0.05	0.30±0.05	0.20±0.10	0.20±0.10
SCR03(0603)	1.60±0.20	0.80±0.15	0.40±0.10	0.30±0.20	0.30±0.15
SCR05(0805)	2.00±0.20	1.25±0.15	0.50±0.15	0.35±0.15	0.35±0.15
SCR06(1206)	3.20±0.20	1.60±0.20	0.55±0.15	0.45±0.20	0.45±0.20
SCR12(1210)	3.20±0.20	2.50±0.20	0.55±0.15	0.50±0.20	0.50±0.20
SCR18(1812)	4.50±0.10	3.00±0.10	0.55±0.05	0.55±0.10	0.80±0.10
SCR20(2010)	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20
SCR32(1218)	3.10±0.10	4.60±0.10	0.55±0.05	0.45±0.10	0.40±0.10
SCR25(2512)	6.30±0.20	3.20±0.20	0.55±0.10	0.60±0.20	0.60±0.20

RATINGE

阻值範圍

TYPE	Power Rating at 70°C	Rate Current Voltage(Vr)	Max Working Voltage(Vw)	Max Over Load Voltage(Vo)	TCR (PPM/°C)	Resistance Tolerance (%)	Resistance Range (Ω)	Operating Temperature (°C)
SCR02	0.0625W	0.13 V~0.86 V	0.43 V	0.86 V	± 800	±1%	0.1~0.99	-55°C~+125°C
					±1500	±5%	0.1~0.99	
SCR03	0.1W	0.17 V~1.09 V	0.54 V	1.08 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR05	0.125W	0.19 V~1.22 V	0.61 V	1.22 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR06	0.25W	0.27 V~1.74 V	0.87 V	1.74 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR12	0.333W	0.31 V~1.98 V	0.99 V	1.98 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR18	0.5W	0.38 V~2.44 V	1.22 V	2.44 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR20	0.5W	0.38 V~2.44 V	1.22 V	2.44 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR32	1W	0.27 V~1.74 V	0.87 V	1.74 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR25	1W	0.54 V~3.46 V	1.73 V	3.46 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	

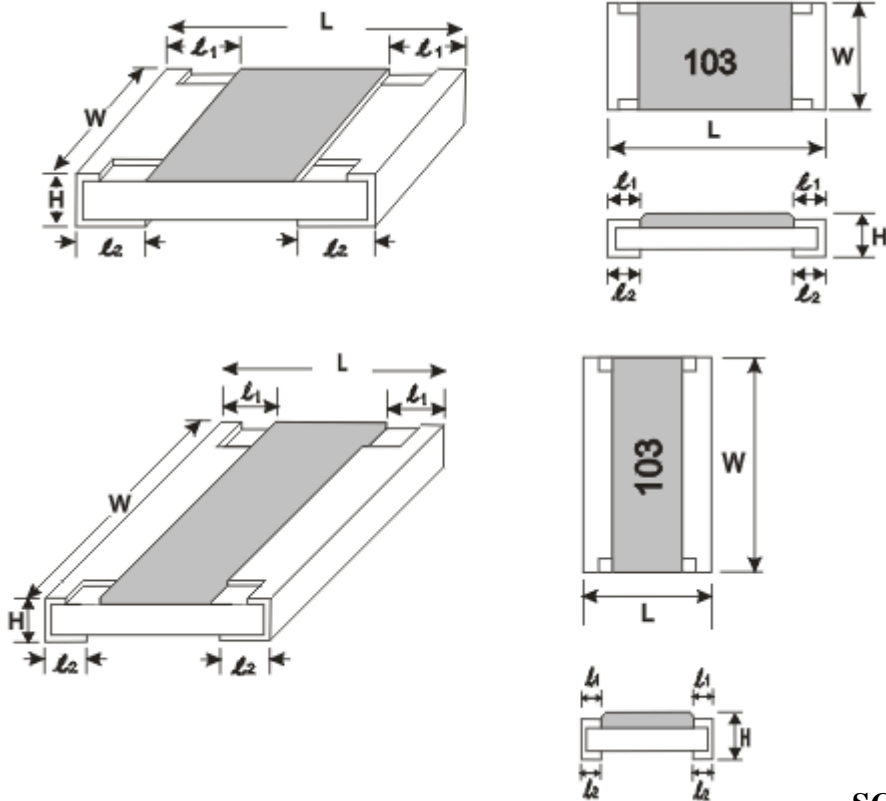
Rated Resistance

厚膜貼片電阻

Resistance	Code	Resistance	Code	Resistance	Code	Resistance	Code	Resistance	Code
10mΩ	R010	65mΩ	R065	0.12Ω	R120	0.27Ω	R270	0.56Ω	R560
15mΩ	R015	68mΩ	R068	0.13Ω	R130	0.30Ω	R300	0.60Ω	R600
20mΩ	R020	70mΩ	R070	0.15Ω	R150	0.33Ω	R330	0.65Ω	R650
30mΩ	R030	75mΩ	R075	0.16Ω	R160	0.36Ω	R360	0.68Ω	R680
40mΩ	R040	80mΩ	R080	0.18Ω	R180	0.40Ω	R400	0.70Ω	R700
50mΩ	R050	90mΩ	R090	0.20Ω	R200	0.43Ω	R430	0.75Ω	R750
56mΩ	R056	0.10Ω	R100	0.22Ω	R220	0.47Ω	R470	0.80Ω	R800
60mΩ	R060	0.11Ω	R110	0.25Ω	R250	0.50Ω	R500	0.90Ω	R900

TRIMMABLE CHIP RESISTORS (TCR SERIES)

- SCR02(0402) SCR06(1206) SCR20(2010)
- SCR03(0603) SCR12(1210) SCR25(2512)
- SCR05(0805) SCR18(1812) SCR32



SCR32

DIMENSION

Unit : mm

TYPE	L	W	H	l_1	l_2
SCR01(0201)	0.60 ± 0.03	0.30 ± 0.03	0.23 ± 0.05	0.15 ± 0.05	0.15 ± 0.05
SCR02(0402)	1.00 ± 0.10	0.50 ± 0.05	0.30 ± 0.05	0.20 ± 0.10	0.20 ± 0.10
SCR03(0603)	1.60 ± 0.20	0.80 ± 0.15	0.40 ± 0.10	0.30 ± 0.20	0.30 ± 0.15
SCR05(0805)	2.00 ± 0.20	1.25 ± 0.15	0.50 ± 0.15	0.35 ± 0.15	0.35 ± 0.15
SCR06(1206)	3.20 ± 0.20	1.60 ± 0.20	0.55 ± 0.15	0.45 ± 0.20	0.45 ± 0.20
SCR12(1210)	3.20 ± 0.20	2.50 ± 0.20	0.55 ± 0.15	0.50 ± 0.20	0.50 ± 0.20
SCR18(1812)	4.50 ± 0.10	3.00 ± 0.10	0.55 ± 0.05	0.55 ± 0.10	0.80 ± 0.10
SCR20(2010)	5.00 ± 0.20	2.50 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20
SCR32(1218)	3.10 ± 0.10	4.60 ± 0.10	0.55 ± 0.05	0.45 ± 0.10	0.40 ± 0.10
SCR25(2512)	6.30 ± 0.20	3.20 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20

RATINGS

TYPE	Power Rating at 70°C	Rate Current Voltage(Vr)	Max Working Voltage(Vw)	Max Over Load Voltage(Vo)	TCR (PPM/°C)	Resistance Tolerance (%)	Resistance Range (Ω)	Operating Temperature (°C)
SCR02	0.0625W	0.13 V~0.86 V	0.43 V	0.86 V	± 800	±1%	0.1~0.99	-55°C~+125°C
					±1500	±5%	0.1~0.99	
SCR03	0.1W	0.17 V~1.09 V	0.54 V	1.08 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR05	0.125W	0.19 V~1.22 V	0.61 V	1.22 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR06	0.25W	0.27 V~1.74 V	0.87 V	1.74 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR12	0.333W	0.31 V~1.98 V	0.99 V	1.98 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR18	0.5W	0.38 V~2.44 V	1.22 V	2.44 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR20	0.5W	0.38 V~2.44 V	1.22 V	2.44 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR32	1W	0.27 V~1.74 V	0.87 V	1.74 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	
SCR25	1W	0.54 V~3.46 V	1.73 V	3.46 V	± 800	±1%	0.01~0.99	
					±1500	±5%	0.01~0.99	

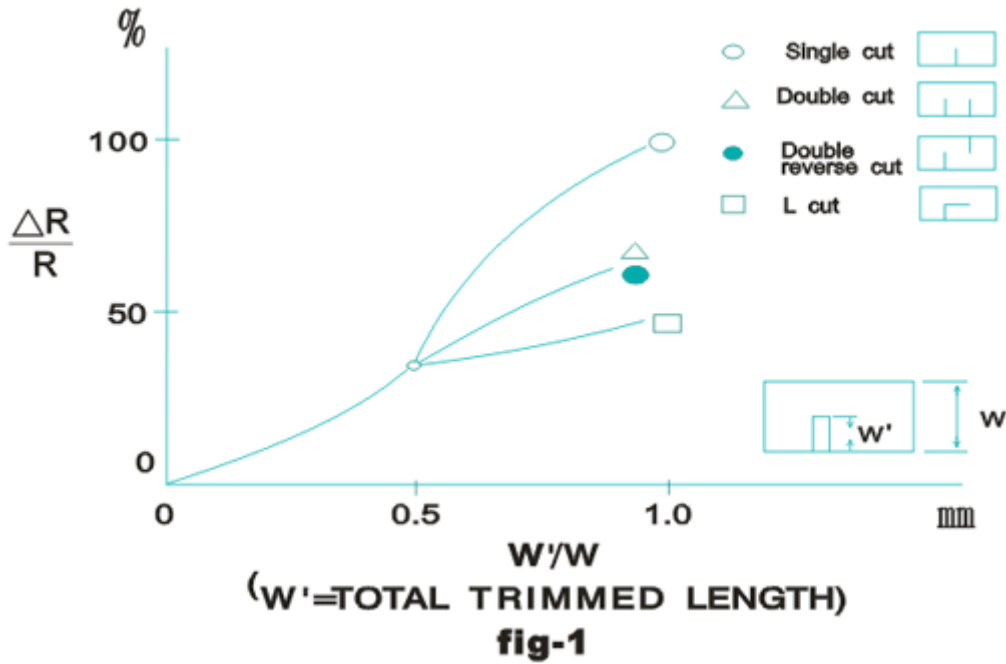
✧ The importance of final adjustment of electric circuits is increasing as electrical products that become more sophisticated and diversified. Instead of a variable resistor ,the TCR series Chip Resistors are developed for those purposes

APPLICATION:

This trim able chip resistor is suitable for the circuit demanding stability as a replacement of variable resistor adjusting circuit .Please note that customer needs laser trimming machine by themselves.

RESISTANCE RISING RATE:

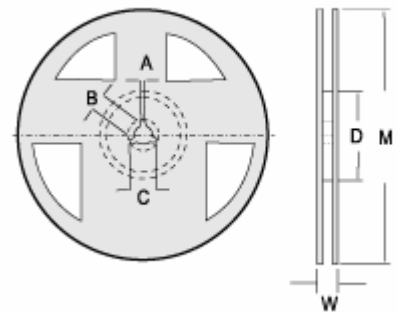
Trimmed by laser resistance rising rate is up to initial resistance x2 .As rising rate differs deppending on trimming form, Please refer to fig-1.



TAPPING SPECIFICATION

Unit : mm

TYPE	SIZE	A	B	C	D	W	M
SCR03 SCR05 SCR06	7" 5K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	178±2.0
	10" 10K/Reel	2.0±0.5	13.5±2.0	21±0.5	80±0.5	12.5±2.0	254±2.0
	13" 20K/Reel	2.0±0.5	13.5±2.0	21±0.5	80±0.5	12.5±2.0	330±2.0
SCR12 SCRA032R SCRA034R SCRA034C SCRN028R	7" 5K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	178±2.0
SCR01 SCR02 SCRA022R SCRA024R SCRA024C	7" 10K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	12.5±2.0	178±2.0
SCR12 SCR20 SCR25	7" 4K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	16.0±2.0	178±2.0
SCR18 SCR32	11" 5K/Reel	2.0±0.5	13.5±2.0	21±0.5	60±0.5	16.0±2.0	278



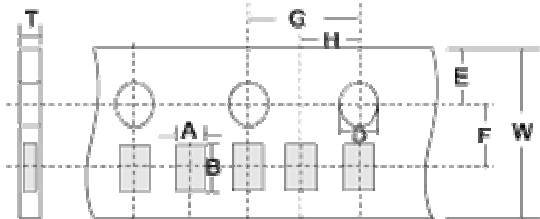
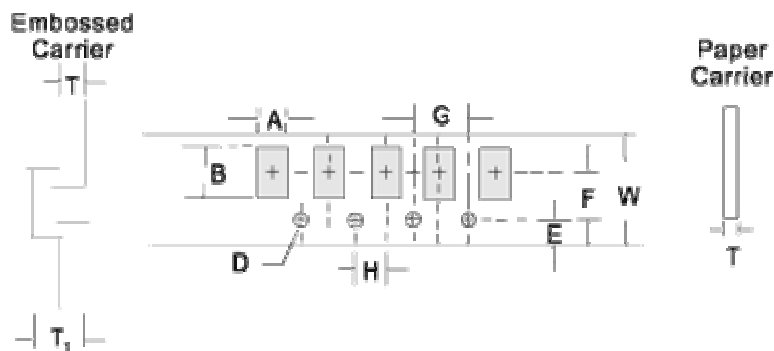


Fig 2

	Size	A	B	W	E	F	G	H	T	D
Paper	022R	1.25±0.1	1.25±0.1	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.45±0.1	1.50±0.10
Type	024C	1.20±0.1	2.20±0.1	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.60±0.1	1.50±0.10
	024R	1.20±0.1	2.20±0.1	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.60±0.1	1.50±0.10
	0402	0.70±0.1	1.20±0.1	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.45±0.1	1.50±0.10

	Size	A	B	W	E	F	G	H	T	D
	028R	1.91±0.1	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
Paper	034C	1.91±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
Type	034R	1.91±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
	0603	1.05±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
	0805	1.55±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
	1206	1.90±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
	1210	2.85±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
	032R	1.80±0.2	3.50±0.2	8.0±0.2	1.75±0.1	3.5±0.05	4.0±0.1	2.0±0.05	0.75±0.1	1.5±0.1
TE	2010	2.80±0.2	3.50±0.2	12±0.1	1.75±0.1	5.5±0.05	4.0±0.1	2.0±0.05	0.23±0.15	1.5±0.1
Embossed	2512	3.40±0.2	3.50±0.2	12±0.1	1.75±0.1	5.5±0.05	4.0±0.1	2.0±0.05	0.23±0.15	1.5±0.1
	LR25	3.40±0.2	3.50±0.2	12±0.1	1.75±0.1	5.5±0.05	4.0±0.1	2.0±0.05	0.23±0.15	1.5±0.1
	1218 1812	3.30±0.2	4.60±0.2	120±0.1	1.75±0.1	5.5±0.05	4.0±0.1	4.0±0.05	0.25±0.2	1.5±0.2



SCR03 STANDARD E-96 VALUES AND 0603 RESISTANCE CODES

Code	A	B	C	D	E	F	G	H	X	Y	Z
Multiplier	10 ⁰	10 ¹	10 ²	10 ³	10 ⁴	10 ⁵	10 ⁶	10 ⁷	10 ⁻¹	10 ⁻²	10 ⁻³

CODING FORMULA
 XX X
 ↑ ↑
 Resistance Code Multiplier Code

Example: 10.2kΩ = $\frac{102}{02} \times \frac{10^3 \Omega}{C} = 02C$
 33.2Ω = $\frac{332}{51} \times \frac{10^{-1}}{X} = 51X$

Marking code :

阻值標示對應表

R-Value	Code	R-Value	Code	R-Value	Code	R-Value	Code
100	01	178	25	316	49	562	73
102	02	182	26	324	50	576	74
105	03	187	27	332	51	590	75
107	04	191	28	340	52	604	76
110	05	196	29	348	53	619	77
113	06	200	30	357	54	634	78
115	07	205	31	365	55	649	79
118	08	210	32	374	56	665	80
121	09	215	33	383	57	681	81
124	10	221	34	392	58	698	82
127	11	226	35	402	59	715	83
130	12	232	36	412	60	732	84
133	13	237	37	422	61	750	85
137	14	243	38	432	62	768	86
140	15	249	39	442	63	787	87
143	16	255	40	453	64	806	88
147	17	261	41	464	65	825	89
150	18	267	42	475	66	845	90
154	19	274	43	487	67	866	91
158	20	280	44	499	68	887	92
162	21	287	45	511	69	909	93
165	22	294	46	523	70	931	94
169	23	301	47	536	71	953	95
174	24	309	48	549	72	976	96

Marking code :

type : SCR05(0805) / SCR06(1206) / SCR12(1210) / SCR18(1812) / SCR20(2010) / SCR32(1218) / SCR25(2512)

1% : marking code, please refer to E96 and E24 data form as below

Ex :120K ,The marking code is 1203 in E 24

Ex :121K ,The marking code is 1213 in E 96

5% : marking code, please refer to E24 data form as below

Ex :120K ,The marking code is 124 in E 24

NOTE: SCR01 (0201) / SCR02 (0402) resistor has no marking code.

E192	E96	E48	E192	E96	E48	E192	E96	E48	E192	E96	E48	E192	E96	E48	
100	100	100	169	169	169	287	287	287	487	487	487	825	825	825	
101			172			291			493			835			
102	102		174	174		294	294		499	499		845	845		
104			176			298			505			856			
105	105	105	178	178	178	301	301	301	511	511	511	866	866	866	
106			180			305			517			876			
107	107		182	182		309	309		523	523		887	887		
109			184			312			530			898			
110	110	110	187	187	187	316	316	316	536	536	536	909	909	909	
111			189			320			542			920			
113	113		191	191		324	324		549	549		931	931		
114			193			328			556			942			
115	115	115	196	196	196	332	332	332	562	562	562	953	953	953	
117			198			336			569			965			
118	118		200	200		340	340		576	576		976	976		
120			203			344			583			988			
121	121	121	205	205	205	348	348	348	590	590	590				
123			208			352			597						
124	124		210	210		357	357		604	604		E24	E12	E6	E3
126			213			361			612			10	10	10	10
127	127	127	215	215	215	365	365	365	619	619	619	11			
129			218			370			626			12	12		
130	130		221	221		374	374		634	634		13			
132			223			379			642			15	15	15	
133	133	133	226	226	226	383	383	383	649	649	649	16			
135			229			388			657			18	18		
137	137		232	232		392	392		665	665		20			
138			234			397			673			22	22	22	22
140	140	140	237	237	237	402	402	402	681	681	681	24			
142			240			407			690			27	27		
143	143		243	243		412	412		698	698		30			
145			246			417			706			33	33	33	
147	147	147	249	249	249	422	422	422	715	715	715	36			
149			252			427			723			39	39		
150	150		255	255		432	432		732	732		43			
152			258			437			741			47	47	47	47
154	154	154	261	261	261	442	442	442	750	750	750	51			
156			264			448			759			56	56		
158	158		267	267		453	453		768	768		62			
160			271			459			777			68	68	68	
162	162	162	274	274	274	464	464	464	787	787	787	75			
164			277			470			796			82	82		
165	165		280	280		475	475		806	806		91			
167			284			481			816						