



Inductors

RF chokes, SBC series

Series/Type: B82141A, B82141B

Date: June 2012

SBC choke (Small Bobbin Core)

Rated inductance 1 ... 1000 μ H

Rated current 55 ... 725 mA

Construction

- Mini ferrite drum core
- Winding: enamel copper wire
- Flame-retardant lacquer coating

Features

- Small size
- Relatively high rated current
- Suitable for wave soldering
- RoHS-compatible

Applications

- RF blocking and filtering
- Decoupling and interference suppression
- For electronic household appliances, automotive and entertainment electronics

Terminals

- Central axial leads (B82141A)
- Radially bent to 5 mm lead spacing (B82141B)
- Base material CuAg0.1
- Electroplated with nickel and pure tin

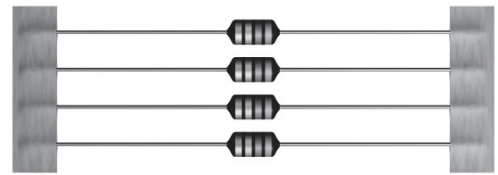
Marking

Inductance indicated by color bands to IEC 60062

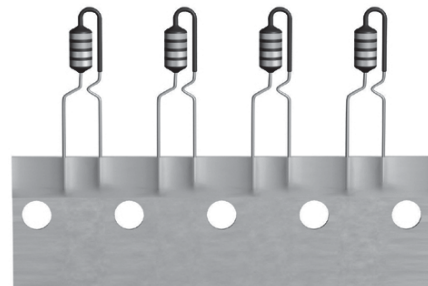
Delivery mode and packing units

- Taped, Ammo and reel packing
- Packing units:

	Ammo (pcs./pack.)	Reel (pcs./reel)
Axial	5000	5000
Radial	2500	2000



B82141A



B82141B

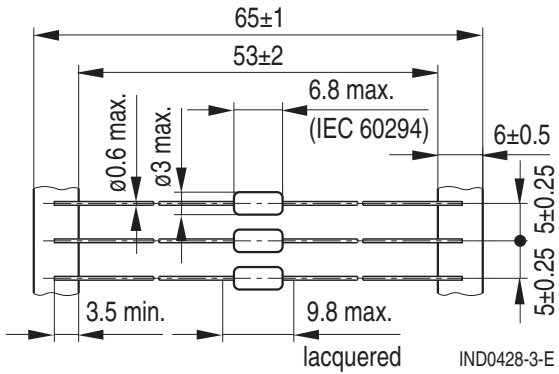
B82141A, B82141B

SBC series, 3.0 x 6.8 (mm)

Dimensional drawings

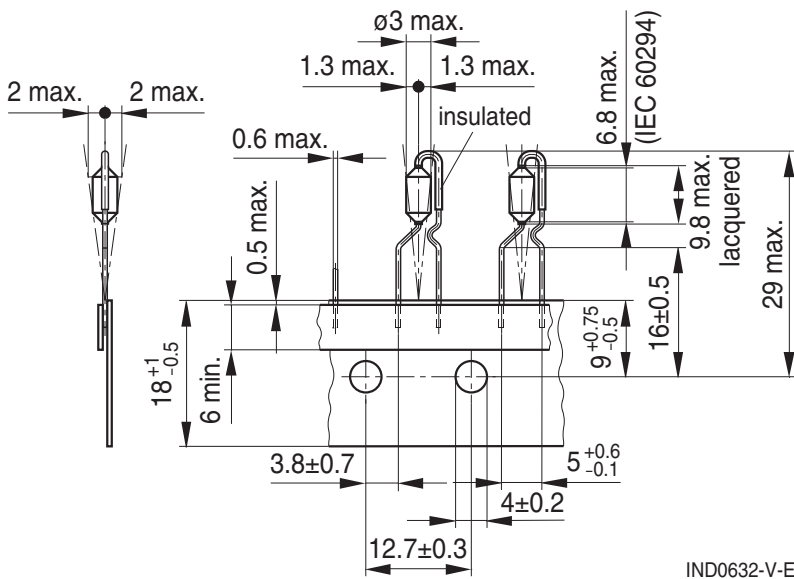
B82141A (axial leads, taped)

Dimensions in mm

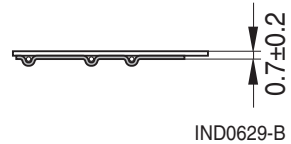


Minimum lead spacing 10 mm

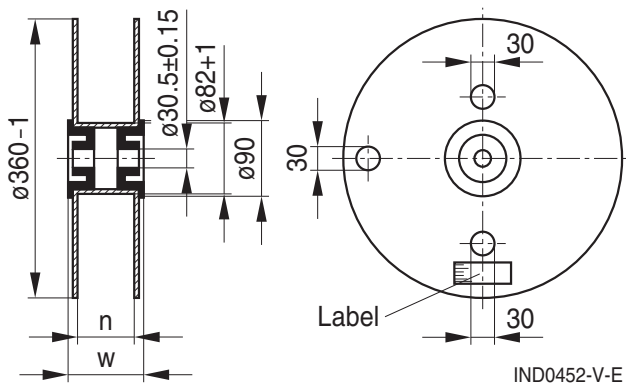
B82141B (central radial leads, taped)



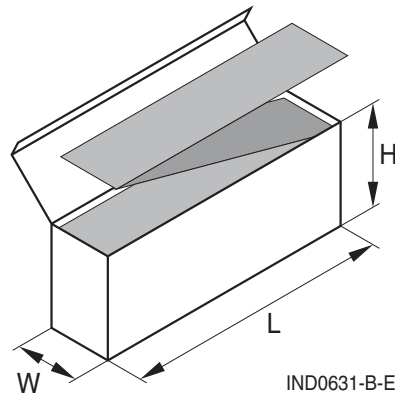
Thickness of tape



Packing



n (mm): Axial 72 +1, radial 42 +1
w (mm): Axial 84 max., radial 54 max.



L × W × H (max. mm):
Axial: 310 × 75 × 120, radial: 340 × 50 × 210

Technical data and measuring conditions

Rated inductance L_R	Measured with LCR meter Agilent 4284A or impedance analyzer Agilent 4294A Measuring frequency: $L_R \leq 10 \mu\text{H}$ = 1 MHz $10 \mu\text{H} < L_R \leq 4700 \mu\text{H}$ = 100 kHz Measuring current: $\leq 1 \text{ mA}$ Measuring temperature: +20 °C
Q factor Q_{\min}	Measured with precision impedance analyzer Agilent 4294A, +20 °C
Rated temperature T_R	+40 °C
Rated current I_R	Maximum permissible DC current at rated temperature
Inductance decrease $\Delta L/L_0$	$\leq 10\%$ (referred to initial value) at I_R , +20 °C
DC resistance R_{\max}	Measured at +20 °C
Resonance frequency $f_{\text{res},\min}$	Measured with Agilent 4294A or 8753ES, +20 °C
Solderability (lead-free)	Sn95.5Ag3.8Cu0.7: +(245 ±5) °C, (3 ±0.3) s Wetting of soldering area $\geq 90\%$ (to IEC 60068-2-20, test Ta)
Resistance to soldering heat	+(260 ±5) °C, 10 s (to IEC 60068-2-20, test Tb)
Tensile strength of leads	$\geq 20 \text{ N}$ (to IEC 60068-2-21, test Ua)
Climatic category	55/125/56 (to IEC 60068-1)
Storage conditions	Mounted: -55 °C ... +125 °C Packaged: -25 °C ... +40 °C, $\leq 75\%$ RH
Weight	Approx. 0.22 g

⚠ Mounting information

When bending the leads, take care that the start-of-winding areas at the face ends (protected by glue and lacquer) are not subjected to any mechanical stress.

Characteristics and ordering codes

L_R μH	Tolerance ¹⁾	Q_{\min}	f_Q MHz	I_R mA	R_{\max} Ω	$f_{\text{res, min}}$ MHz	Ordering code ²⁾ (reel packing) ³⁾
1.0	$\pm 10\% \triangleq K$	40	7.96	725	0.19	180	B82141+1102K000
1.2		40	7.96	700	0.20	160	B82141+1122K000
1.5		40	7.96	670	0.22	155	B82141+1152K000
1.8		45	7.96	660	0.23	145	B82141+1182K000
2.2		45	7.96	630	0.25	130	B82141+1222K000
2.7		45	7.96	610	0.27	110	B82141+1272K000
3.3		50	7.96	580	0.30	90	B82141+1332K000
3.9		50	7.96	560	0.32	70	B82141+1392K000
4.7		50	7.96	530	0.36	60	B82141+1472K000
5.6		50	7.96	510	0.38	50	B82141+1562K000
6.8		50	7.96	480	0.43	40	B82141+1682K000
8.2		50	7.96	450	0.52	30	B82141+1822K000
10		55	2.52	410	0.60	25	B82141+1103K000
12		55	2.52	385	0.67	20	B82141+1123K000
15		55	2.52	365	0.74	17	B82141+1153K000
18		55	2.52	350	0.81	14	B82141+1183K000
22		55	2.52	335	0.90	12	B82141+1223K000
27		55	2.52	315	1.00	11	B82141+1273K000
33		55	2.52	300	1.12	10	B82141+1333K000
39		55	2.52	285	1.21	8.5	B82141+1393K000

1) Closer tolerances on request.

2) Replace the + by code letter »A« for axial taping or by »B« for radial taping.

3) For Ammo pack the last digit has to be a »9«. Example: B82141A1102K009

Characteristics and ordering codes

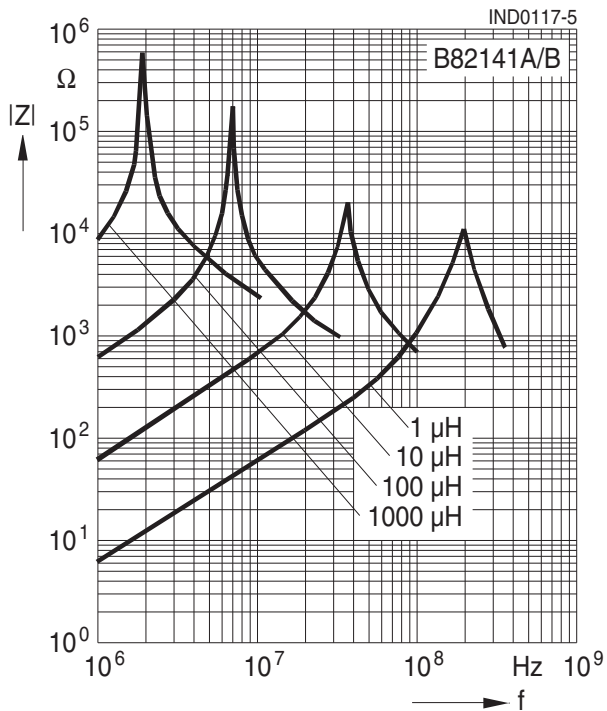
L_R μH	Tolerance ¹⁾	Q_{\min}	f_Q MHz	I_R mA	R_{\max} Ω	$f_{\text{res, min}}$ MHz	Ordering code ²⁾ (reel packing) ³⁾
47	$\pm 5\% \triangleq J$	55	2.52	200	2.40	7.7	B82141+1473J000
56		55	2.52	195	2.60	6.8	B82141+1563J000
68		55	2.52	185	2.90	5.7	B82141+1683J000
82		55	2.52	175	3.20	5.5	B82141+1823J000
100		60	0.796	170	3.50	5.3	B82141+1104J000
120		60	0.796	160	3.80	5.0	B82141+1124J000
150		60	0.796	150	4.30	4.6	B82141+1154J000
180		60	0.796	135	5.30	4.2	B82141+1184J000
220		60	0.796	130	5.80	3.8	B82141+1224J000
270		60	0.796	115	7.80	3.2	B82141+1274J000
330		60	0.796	105	9.10	3.0	B82141+1334J000
390		60	0.796	95	11.0	2.7	B82141+1394J000
470		60	0.796	90	12.0	2.3	B82141+1474J000
560		60	0.796	75	16.5	2.2	B82141+1564J000
680		60	0.796	65	22.0	2.0	B82141+1684J000
820		60	0.796	60	25.0	1.8	B82141+1824J000
1000		60	0.796	55	33.0	1.5	B82141+1105J000

1) Closer tolerances on request.

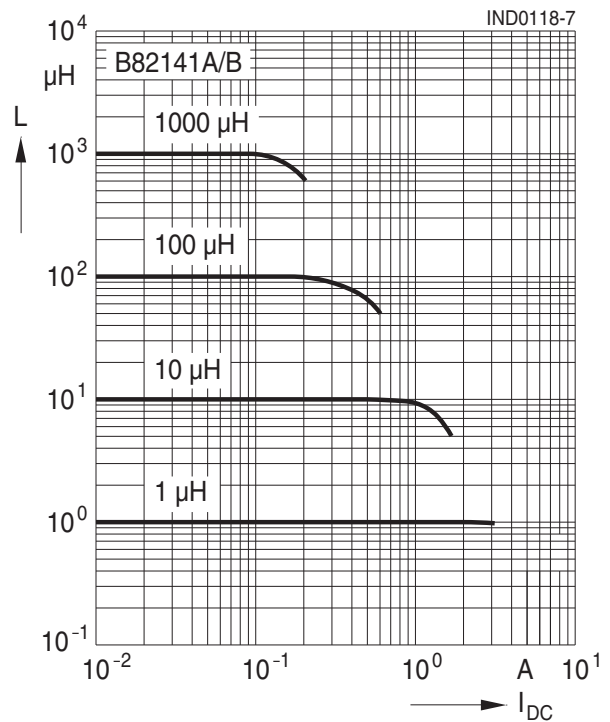
2) Replace the + by code letter »A« for axial taping or by »B« for radial taping.

3) For Ammo pack the last digit has to be a »9«. Example: B82141B1473J009

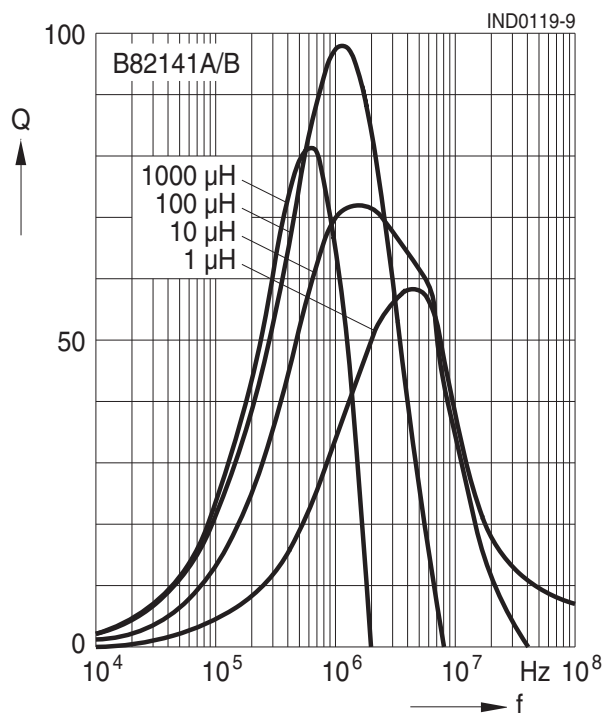
Impedance $|Z|$ versus frequency f
measured with impedance analyzer Agilent 4294A or S-parameter network analyzer Agilent 8753ES, typical values at +20 °C



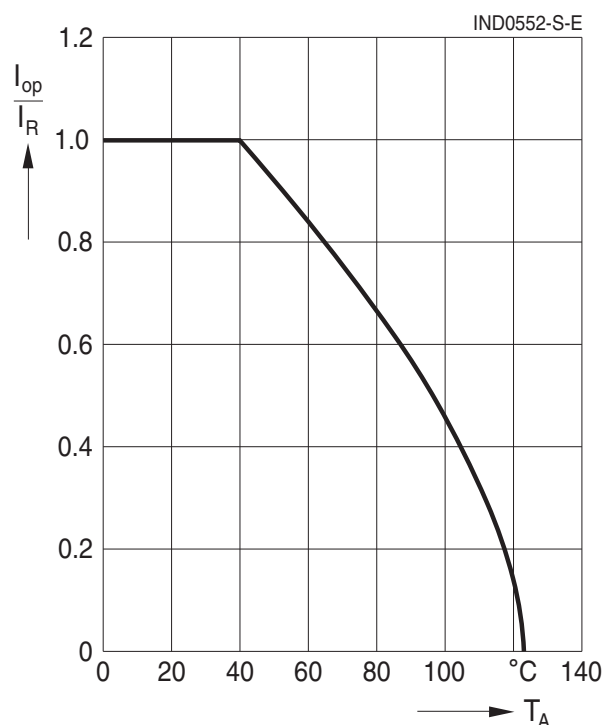
Inductance L versus DC load current I_{DC}
measured with LCR meter Agilent 4284A, typical values at +20 °C



Q factor versus frequency f
measured with impedance analyzer Agilent 4294A, typical values at +20 °C



Current derating I_{op}/I_R versus ambient temperature T_A
(rated temperature $T_R = +40$ °C)



Cautions and warnings

- Please note the recommendations in our Inductors data book (latest edition) and in the data sheets.
 - Particular attention should be paid to the derating curves given there.
 - The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.
- If the components are to be washed varnished it is necessary to check whether the washing varnish agent that is used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.

Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.
- The following points must be observed if the components are potted in customer applications:
 - Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
 - It is necessary to check whether the potting material used attacks or destroys the wire insulation, plastics or glue.
 - The effect of the potting material can change the high-frequency behaviour of the components.
- Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.
- Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CeraLink, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FilterCap, FormFit, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.

Mouser Electronics

Authorized Distributor

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

EPCOS:

B82141A1332K	B82141A1682K	B82141A1333K000	B82141A1474J000	B82141A1102K000	B82141A1102K009
B82141A1103K000	B82141A1103K009	B82141A1104J000	B82141A1105J000	B82141A1122K000	
B82141A1122K009	B82141A1123K000	B82141A1123K009	B82141A1124J000	B82141A1152K000	
B82141A1152K009	B82141A1153K000	B82141A1153K009	B82141A1154J000	B82141A1182K000	
B82141A1182K009	B82141A1183K000	B82141A1183K009	B82141A1184J000	B82141A1222K000	
B82141A1222K009	B82141A1223K000	B82141A1223K009	B82141A1224J000	B82141A1272K000	
B82141A1272K009	B82141A1273K000	B82141A1273K009	B82141A1274J000	B82141A1332K009	
B82141A1333K009	B82141A1334J000	B82141A1392K000	B82141A1392K009	B82141A1393K000	
B82141A1393K009	B82141A1394J000	B82141A1472K000	B82141A1472K009	B82141A1473J000	
B82141A1562K000	B82141A1562K009	B82141A1563J000	B82141A1564J000	B82141A1682K009	
B82141A1683J000	B82141A1684J000	B82141A1822K000	B82141A1822K009	B82141A1823J000	
B82141A1824J000	B82141B1102K000	B82141B1102K009	B82141B1103K009	B82141B1105J000	
B82141B1122K009	B82141B1123K009	B82141B1152K009	B82141B1153K000	B82141B1153K009	
B82141B1182K009	B82141B1183K009	B82141B1222K000	B82141B1222K009	B82141B1223K009	
B82141B1272K009	B82141B1273K009	B82141B1332K000	B82141B1332K009	B82141B1333K000	
B82141B1333K009	B82141B1334J000	B82141B1392K009	B82141B1393K009	B82141B1472K000	
B82141B1472K009	B82141B1473J000	B82141B1562K009	B82141B1682K000	B82141B1682K009	
B82141B1684J000	B82141B1822K000	B82141B1822K009	B82143A1102K000	B82143A1103K000	
B82143A1123K000	B82143A1153K000	B82143A1223K000	B82143A1273K000	B82143B1102K000	
B82143B1103K000	B82143B1273K000	B82143B1472K000	B82143B1682K000		



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.