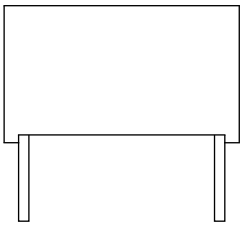
Metallized Polyester Film Capacitors
MKT Radial Type



FEATURES

- 10.0 mm to 27.5 mm lead pitch
- Self-healing properties
- Flame retardant case
- Material categorization:
  For definitions of compliance please see www.vishay.com/doc?99912

Pb-free
RoHS COMPLIANT
HALOGEN FREE
GREEN (5-2008)

APPLICATIONS

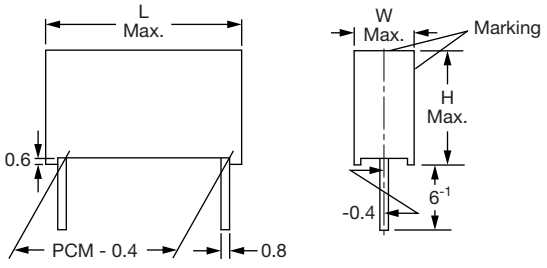
Blocking, bypassing, filtering, timing, coupling and decoupling circuits, interference suppression in low voltage applications.

QUICK REFERENCE DATA	
Capacitance range (E12 series)	1000 pF to 15 µF (preferred values according to E6)
Capacitance tolerance	± 20 % (M), ± 10 % (K), ± 5 % (J) (on request)
Climatic testing class according to IEC 60068	55/100/56
Reference standards	IEC 60384-2
Dielectric	Polyester film
Electrodes	Vacuum deposited aluminum
Construction	Extended metallized film
Encapsulation	Flame retardant plastic case UL-class 94 V-0
Leads	Tinned wire
Marking	Manufacturer's logo; type; C-value; rated voltage; tolerance; date of manufacture
Temperature range	-55 °C to +100 °C
Rated DC voltage	63 V_{DC}, 100 V_{DC}, 250 V_{DC}, 400 V_{DC}, 630 V_{DC}, 1000 V_{DC}
Permissible AC voltages (RMS) up to 60 Hz	40 V_{AC}, 63 V_{AC}, 160 V_{AC}, 200 V_{AC}, 220 V_{AC}
Capacitance drift	Up to +40 °C, ± 1.5 % for a period of two years
Derating for DC and AC category voltage U_C	At +85 °C: $U_C = 1.0\ U_R$ At +100 °C: $U_C = 0.8\ U_R$
Self inductance	~ 6 nH measured with 2 mm long leads
Pull test on leads	≥ 30 N in direction of leads according to IEC 60068-2-21

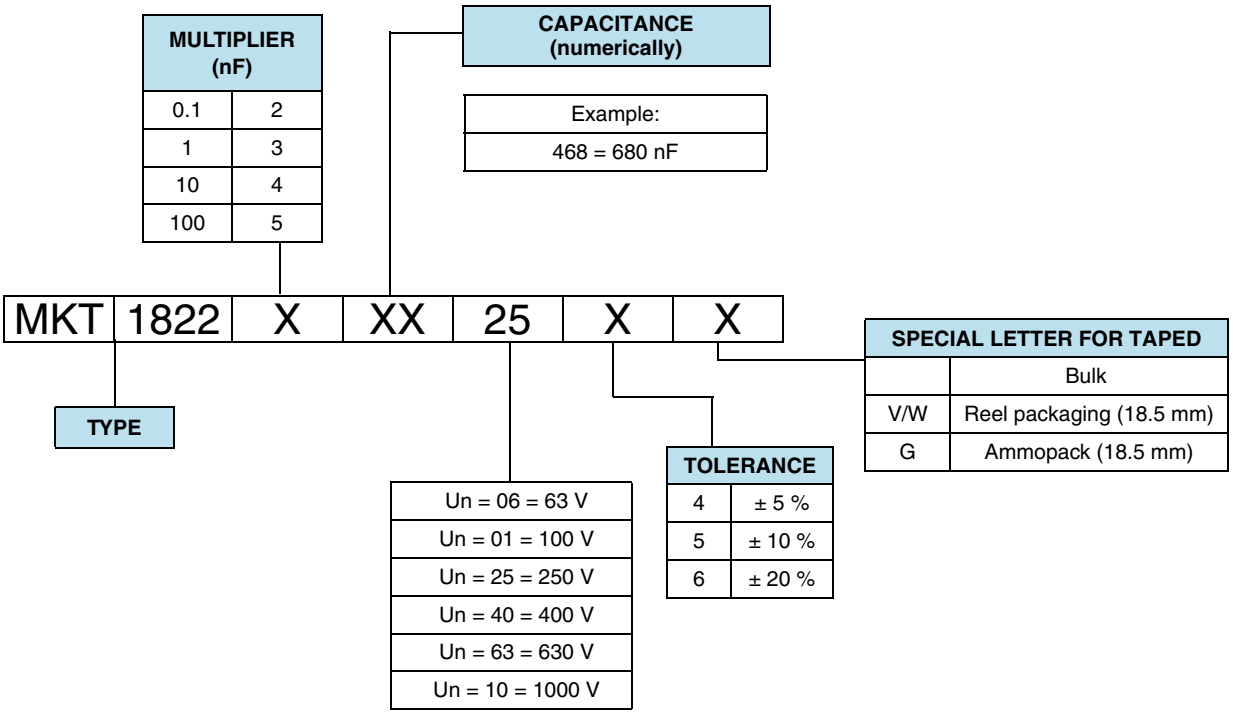
Note

- For more detailed data and test requirements, contact dc-film@vishay.com

DIMENSIONS in millimeters



COMPOSITION OF CATALOG NUMBER



Note

- For detailed tape specifications refer to packaging information www.vishay.com/docs?28139 or “Recommended Packaging” table

SPECIFIC REFERENCE DATA						
DESCRIPTION				**MAX. VALUE**		
Tangent of loss angle:				at 1 kHz	at 10 kHz	at 100 kHz
C ≤ 0.1 µF				8×10^{-3}	15×10^{-3}	25×10^{-3}
0.1 µF < C ≤ 1.0 µF				8×10^{-3}	15×10^{-3}	-
C > 1.0 µF				10×10^{-3}	-	-
PCM (mm)	**MAXIMUM PULSE RISE TIME (dV/dt) [V/µs]**					
	63 V_{DC}	**100 V_{DC}**	**250 V_{DC}**	**400 V_{DC}**	**630 V_{DC}**	**1000 V_{DC}**
10	11	13	22	37	60	130
15	7	8	13	21	33	65
22.5	4	5	8	13	19	34
27.5	3	4	6	10	14	25
If the maximum pulse voltage is less than the rated voltage higher dV/dt values can be permitted.						
R between leads, for C ≤ 0.33 µF and U_R ≤ 100 V					> 15 000 MΩ	
R between leads, for C ≤ 0.33 µF and U_R > 100 V					> 30 000 MΩ	
RC between leads, for C > 0.33 µF and U_R ≤ 100 V					> 5000 s	
RC between leads, for C > 0.33 µF and U_R > 100 V					> 10 000 s	
R between leads and case, 100 V; (foil method)					> 30 000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA); rise time < 1000 V/s					1.6 x U_{RDC}, 1 min	
Withstanding (DC) voltage between leads and case					2 x U_{RDC}, 1 min	
Maximum application temperature					100 °C	

ELECTRICAL DATA

U_{RDC} (V)	CAP. (µF)	CAPACITANCE CODE	VOLTAGE CODE	V_{AC}	DIMENSIONS W x H x L	PCM
63	0.22	-422	06	40	4.0 x 9.0 x 13.0	10
	0.33	-433			4.0 x 9.0 x 13.0	10
	0.47	-447			5.5 x 10.5 x 13.0	10
	0.68	-468			5.5 x 10.5 x 18.0	15
	1.0	-510			5.5 x 10.5 x 18.0	15
	1.5	-515			6.5 x 12.5 x 18.0	15
	2.2	-522			7.5 x 13.5 x 18.0	15
	3.3	-533			7.5 x 15.5 x 26.5	22.5
	4.7	-547			8.5 x 16.5 x 26.5	22.5
	6.8	-568			10.5 x 18.5 x 26.5	22.5
	10.0	-610			11.5 x 20.5 x 31.5	27.5
	15.0	-615			13.5 x 23.5 x 31.5	27.5
100	0.068	-368	01	63	4.0 x 9.0 x 13.0	10
	0.10	-410			4.0 x 9.0 x 13.0	10
	0.15	-415			4.0 x 9.0 x 13.0	10
	0.22	-422			4.5 x 9.5 x 13.0	10
	0.33	-433			5.5 x 10.5 x 18.0	15
	0.47	-447			5.5 x 10.5 x 18.0	15
	0.68	-468			6.5 x 12.5 x 18.0	15
	1.0	-510			7.5 x 13.5 x 18.0	15
	1.5	-515			7.5 x 15.5 x 26.5	22.5
	2.2	-522			8.5 x 16.5 x 26.5	22.5
	3.3	-533			10.5 x 18.5 x 26.5	22.5
	4.7	-547			11.5 x 20.5 x 31.5	27.5
	6.8	-568			13.5 x 23.5 x 31.5	27.5
	10.0	-610			15.0 x 24.5 x 31.5	27.5
	15.0	-615			16.5 x 29.5 x 31.5	27.5
250	0.033	-333	25	160	4.0 x 9.0 x 13.0	10
	0.047	-347			4.0 x 9.0 x 13.0	10
	0.068	-368			4.5 x 9.5 x 13.0	10
	0.10	-410			5.5 x 10.5 x 18.0	15
	0.15	-415			5.5 x 10.5 x 18.0	15
	0.22	-422			5.5 x 10.5 x 18.0	15
	0.33	-433			6.5 x 12.5 x 18.0	15
	0.47	-447			6.5 x 14.5 x 26.5	22.5
	0.68	-468			7.5 x 15.5 x 26.5	22.5
	1.0	-510			8.5 x 16.5 x 26.5	22.5
	1.5	-515			9.0 x 18.5 x 31.5	27.5
	2.2	-522			11.5 x 20.5 x 31.5	27.5
	3.3	-533			13.5 x 23.5 x 31.5	27.5
400	0.0010	-210	40	200	4.0 x 9.0 x 13.0	10
	0.0015	-215			4.0 x 9.0 x 13.0	10
	0.0022	-222			4.0 x 9.0 x 13.0	10
	0.0033	-233			4.0 x 9.0 x 13.0	10
	0.0047	-247			4.0 x 9.0 x 13.0	10
	0.0068	-268			4.0 x 9.0 x 13.0	10
	0.010	-310			4.0 x 9.0 x 13.0	10
	0.015	-315			4.0 x 9.0 x 13.0	10
	0.022	-322			4.0 x 9.0 x 13.0	10
	0.033	-333			4.0 x 9.0 x 13.0	10
	0.047	-347			5.5 x 10.5 x 18.0	15
	0.068	-368			5.5 x 10.5 x 18.0	15
	0.10	-410			5.5 x 10.5 x 18.0	15
	0.15	-415			6.5 x 12.5 x 18.0	15
	0.22	-422			7.5 x 15.5 x 26.5	22.5
	0.33	-433			8.5 x 16.5 x 26.5	22.5
	0.47	-447			10.5 x 18.5 x 26.5	22.5
	0.68	-468			11.5 x 20.5 x 31.5	27.5
	1.0	-510			11.5 x 20.5 x 31.5	27.5
	1.5	-515			13.5 x 23.5 x 31.5	27.5

ELECTRICAL DATA

U_{RDC} (V)	CAP. (µF)	CAPACITANCE CODE	VOLTAGE CODE	V_{AC}	DIMENSIONS W x H x L	PCM
630	0.0010	-210	63 (1)	220	4.0 x 9.0 x 13.0	10
	0.0015	-215			4.0 x 9.0 x 13.0	10
	0.0022	-222			4.0 x 9.0 x 13.0	10
	0.0033	-233			4.0 x 9.0 x 13.0	10
	0.0047	-247			4.0 x 9.0 x 13.0	10
	0.0068	-268			4.0 x 9.0 x 13.0	10
	0.010	-310			4.0 x 9.0 x 13.0	10
	0.015	-315			5.5 x 10.5 x 13.0	10
	0.022	-322			6.5 x 11.5 x 13.0	10
	0.033	-333			5.5 x 10.5 x 18.0	15
	0.047	-347			6.5 x 12.5 x 18.0	15
	0.068	-368			7.5 x 13.5 x 18.0	15
	0.10	-410			6.5 x 14.5 x 26.5	22.5
	0.15	-415			7.5 x 15.5 x 26.5	22.5
	0.22	-422			8.5 x 16.5 x 26.5	22.5
	0.33	-433			11.5 x 20.5 x 31.5	27.5
	0.47	-447			11.5 x 20.5 x 31.5	27.5
	0.68	-468			13.5 x 23.5 x 31.5	27.5
	1.0	-510			15.0 x 24.5 x 31.5	27.5
1000	0.0010	-210	10 (1)	220	4.0 x 9.0 x 13.0	10
	0.0015	-215			4.0 x 9.0 x 13.0	10
	0.0022	-222			4.0 x 9.0 x 13.0	10
	0.0033	-233			4.0 x 9.0 x 13.0	10
	0.0047	-247			5.5 x 10.5 x 13.0	10
	0.0068	-268			6.5 x 11.5 x 13.0	10
	0.010	-310			5.5 x 10.5 x 18.0	15
	0.015	-315			6.5 x 12.5 x 18.0	15
	0.022	-322			7.5 x 13.5 x 18.0	15
	0.033	-333			6.5 x 14.5 x 26.5	22.5
	0.047	-347			7.5 x 15.5 x 26.5	22.5
	0.068	-368			8.5 x 16.5 x 26.5	22.5
	0.10	-410			10.5 x 18.5 x 26.5	22.5
	0.15	-415			11.5 x 20.5 x 31.5	27.5
	0.22	-422			13.5 x 23.5 x 31.5	27.5
	0.33	-433			16.5 x 29.5 x 31.5	27.5
	0.47	-447			20.0 x 35.0 x 31.5	27.5

Note

(1) Not suitable for mains applications.

RECOMMENDED PACKAGING

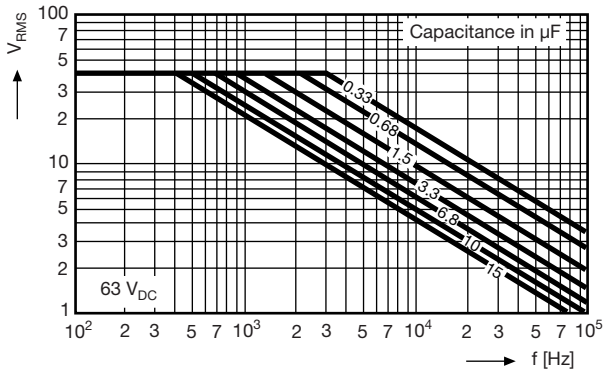
LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 10	PCM 15	PCM 22.5 TO 27.5
D	Ammo	16.5	S (1)	MKT1822-422-065-D	X	X	-
G	Ammo	18.5	S (1)	MKT1822-422-065-G	X	X	-
F	Reel	16.5	350	MKT1822-422-065-F	X	X	-
W	Reel	18.5	350	MKT1822-422-065-W	X	X	-
V	Reel	18.5	500	MKT1822-510-255-V	-	X	X
G	Ammo	18.5	L (2)	MKT1822-510-255-G	-	-	X
-	Bulk	-	-	MKT1822-510-255	X	X	X
-	Bulk	-	-	MKT1822-522-255	X	-	X

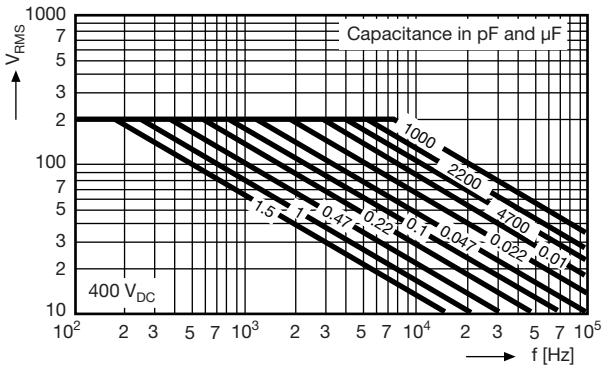
Notes

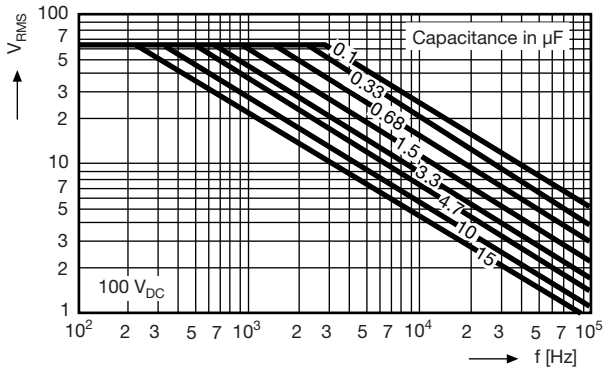
(1) S = Box size 55 mm x 210 mm x 340 mm (W x H x L)

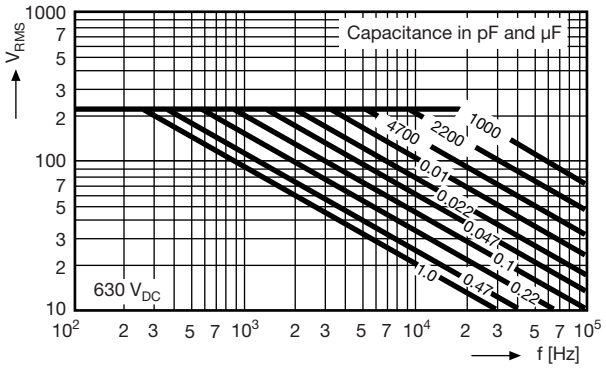
(2) L = Box size 60 mm x 360 mm x 510 mm (W x H x L)

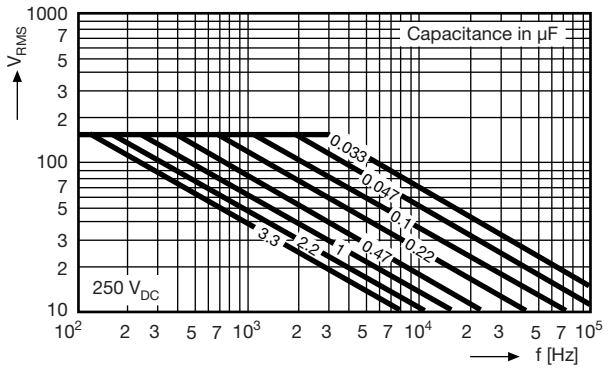
PERMISSIBLE AC VOLTAGE VS. FREQUENCY

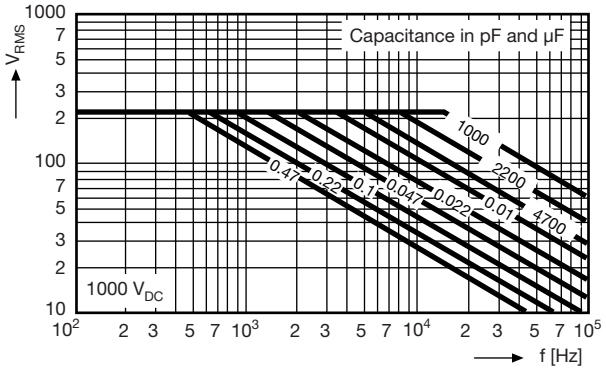












Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

OCEAN CHIPS
Океан Электроники
Поставка электронных компонентов

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

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «**JONHON**», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «**FORSTAR**».

AVIC JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).

FORSTAR®

Телефон: 8 (812) 309-75-97 (многоканальный)
Факс: 8 (812) 320-03-32
Электронная почта: ocean@oceanchips.ru
Web: http://oceanchips.ru/
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А