



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## CPH6350 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

### Features

- 4V drive
- Low ON-resistance
- Protection diode in

### Specifications

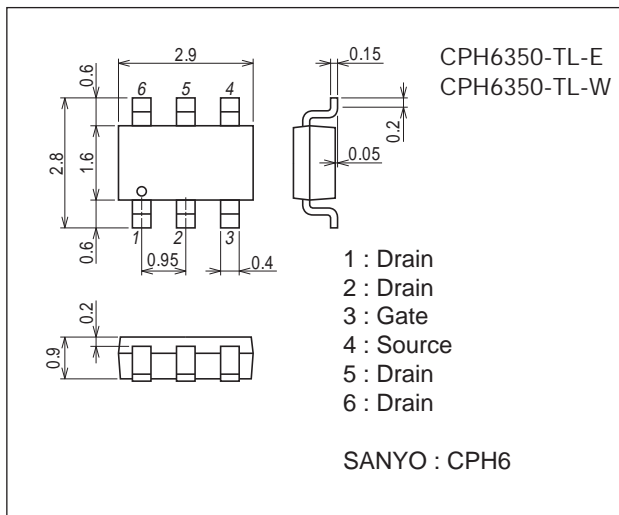
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		-30	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ID		-6	A
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-24	A
Allowable Power Dissipation	PD	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)	1.6	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

### Package Dimensions

unit : mm (typ)

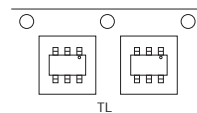
7018A-003



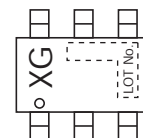
### Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

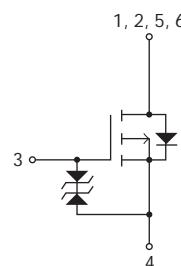
### Packing Type: TL



### Marking



### Electrical Connection

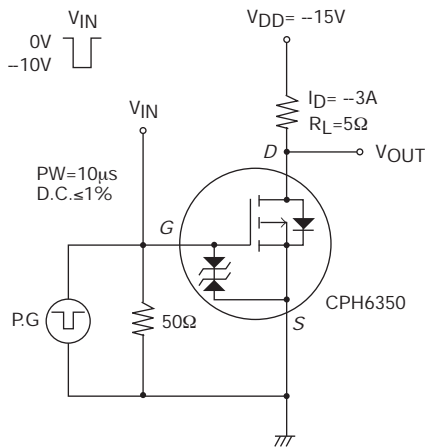


# CPH6350

## Electrical Characteristics at Ta=25°C

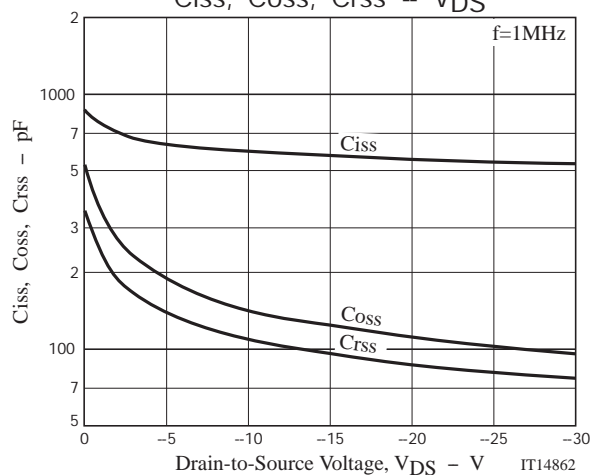
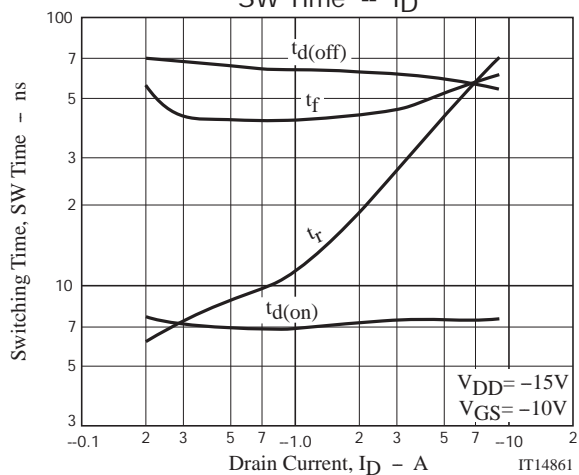
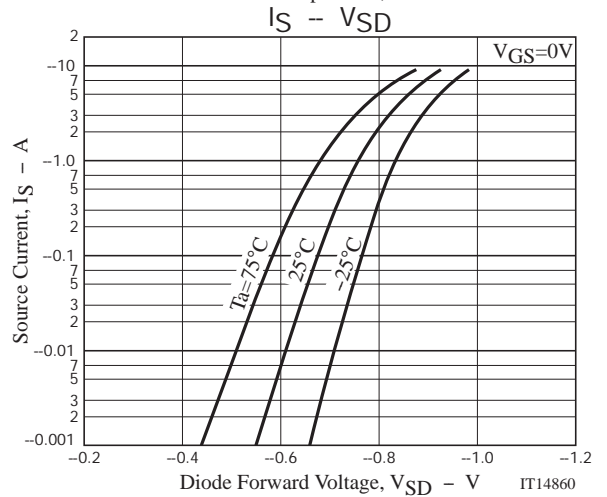
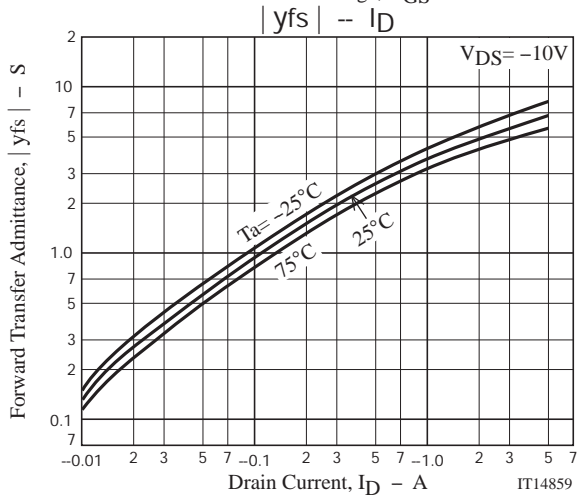
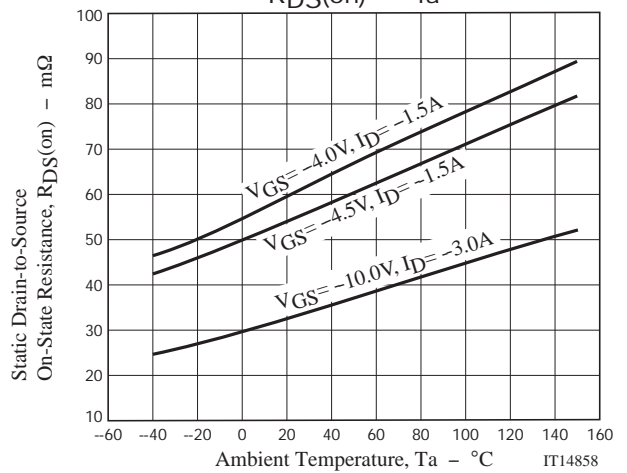
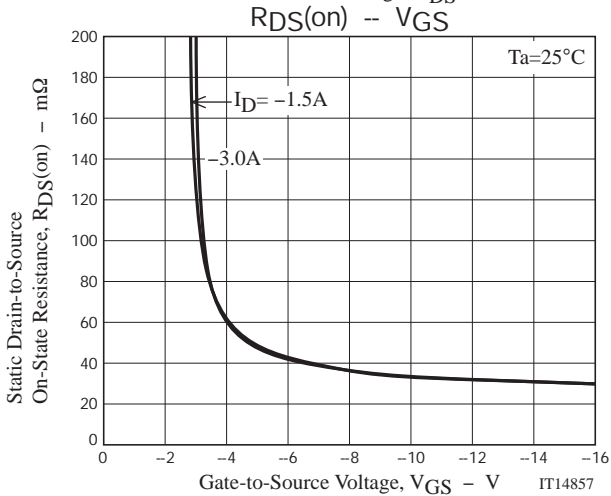
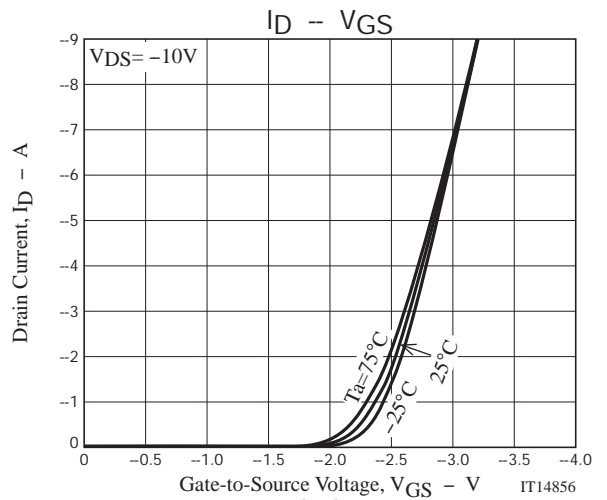
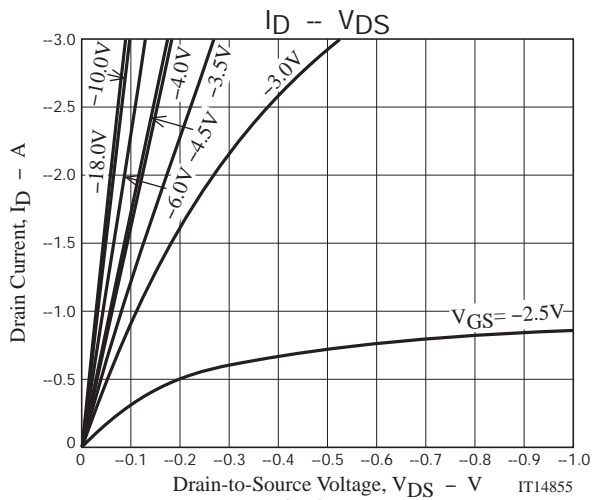
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I <sub>D</sub> =-1mA, V <sub>GS</sub> =0V	-30			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>GS</sub> =±16V, V <sub>DS</sub> =0V			±10	μA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =-10V, I <sub>D</sub> =-3A		5.4		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-3A, V <sub>GS</sub> =-10V		33	43	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-1.5A, V <sub>GS</sub> =-4.5V		58	82	mΩ
	R <sub>DS(on)3</sub>	I <sub>D</sub> =-1.5A, V <sub>GS</sub> =-4V		61	86	mΩ
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =-10V, f=1MHz		600		pF
Output Capacitance	C <sub>oss</sub>			145		pF
Reverse Transfer Capacitance	C <sub>rss</sub>			110		pF
Turn-ON Delay Time	t <sub>d(on)</sub>		See specified Test Circuit.		7.4	
Rise Time	t <sub>r</sub>			27		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>			62		ns
Fall Time	t <sub>f</sub>			45		ns
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> =-15V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-6A			13	
Gate-to-Source Charge	Q <sub>gs</sub>			1.8		nC
Gate-to-Drain "Miller" Charge	Q <sub>gd</sub>			3.2		nC
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-6A, V <sub>GS</sub> =0V		-0.87	-1.2	V

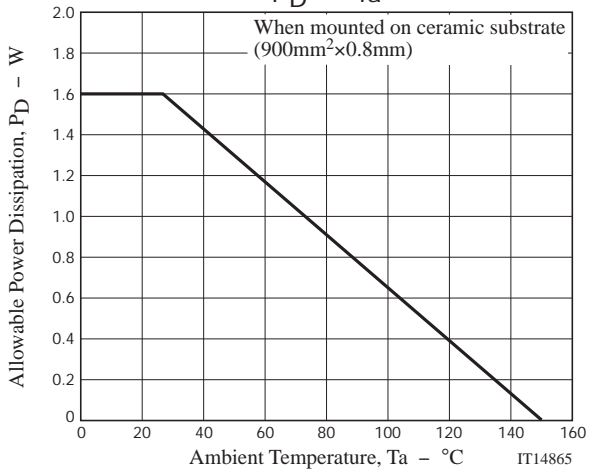
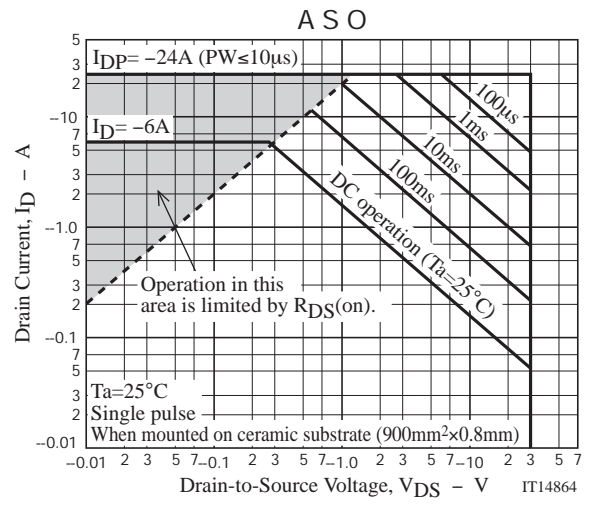
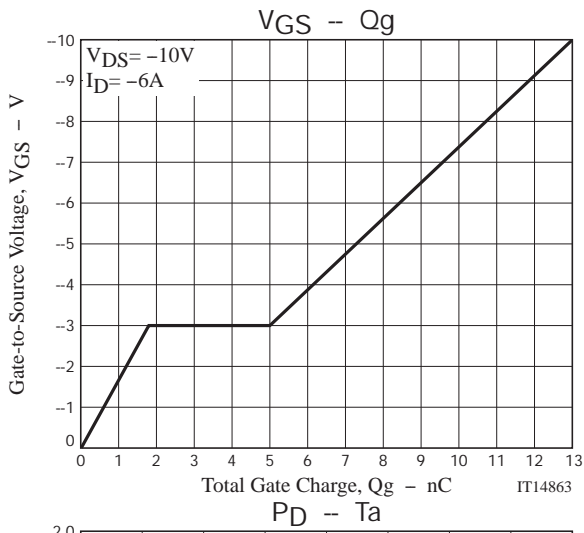
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
CPH6350-TL-E	CPH6	3,000pcs./reel	Pb Free
CPH6350-TL-W	CPH6	3,000pcs./reel	Pb Free and Halogen Free





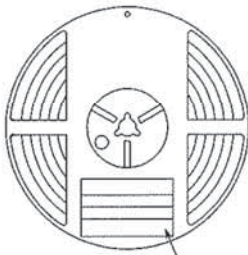
# CPH6350

## Embossed Taping Specification CPH6350-TL-E, CPH6350-TL-W

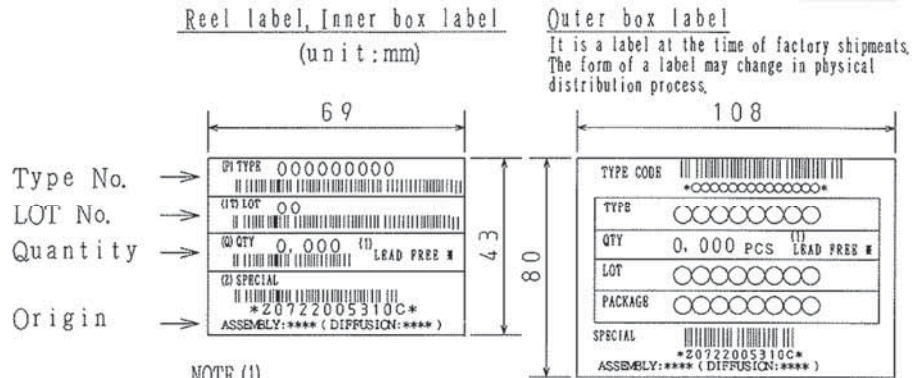
### 1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

### Packing method



Reel label



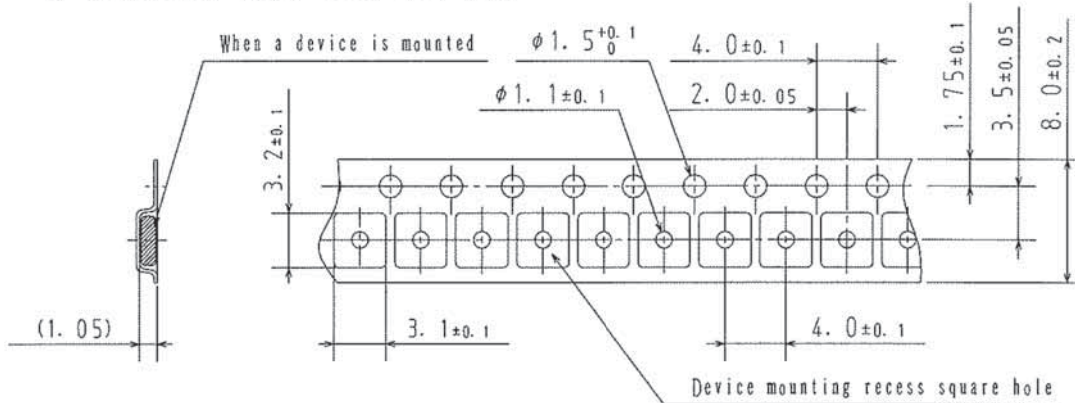
#### NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

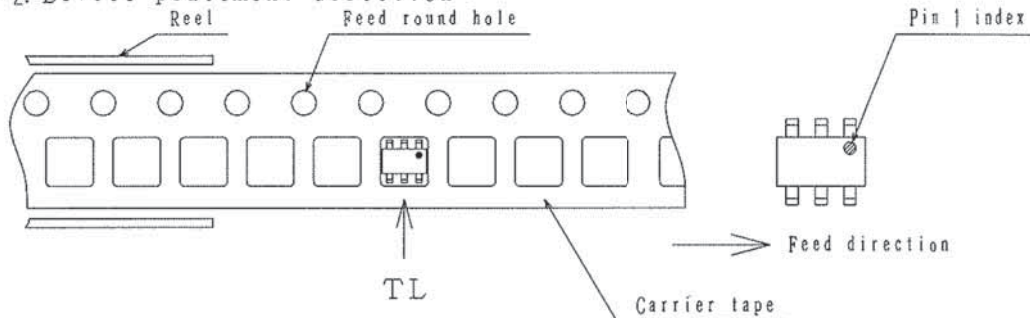
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

### 2. Taping configuration

#### 2-1. Carrier tape size (unit:mm)



#### 2-2. Device placement direction

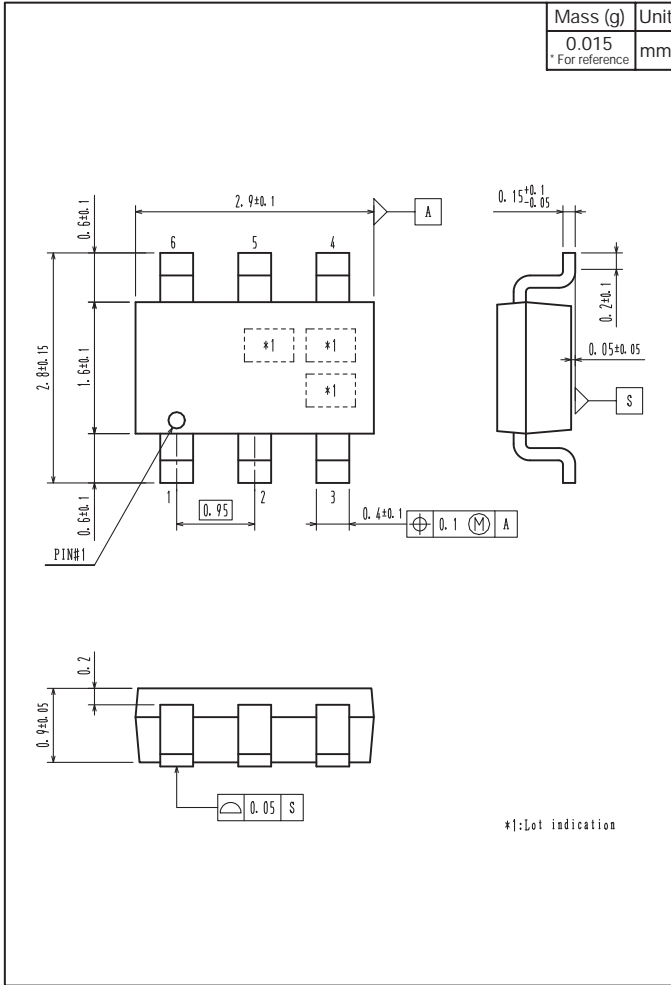


Those with pin 1 index on the feed hole side.....TL

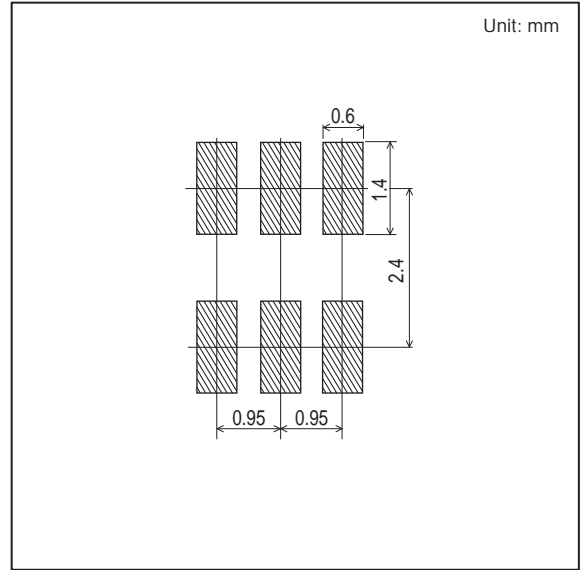
# CPH6350

## Outline Drawing

CPH6350-TL-E, CPH6350-TL-W



## Land Pattern Example



Note on usage : Since the CPH6350 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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#### Как с нами связаться

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

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

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