



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SFT1342 — P-Channel Silicon MOSFET — General-Purpose Switching Device Applications

### Features

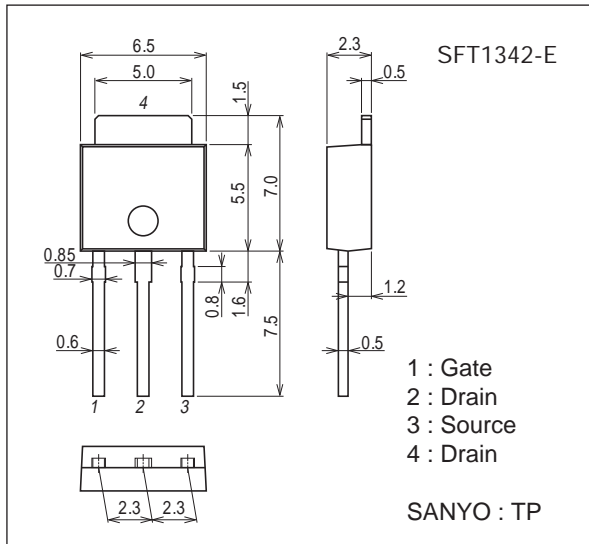
- Motor drive application
- Protection diode in
- 4V drive

### Specifications

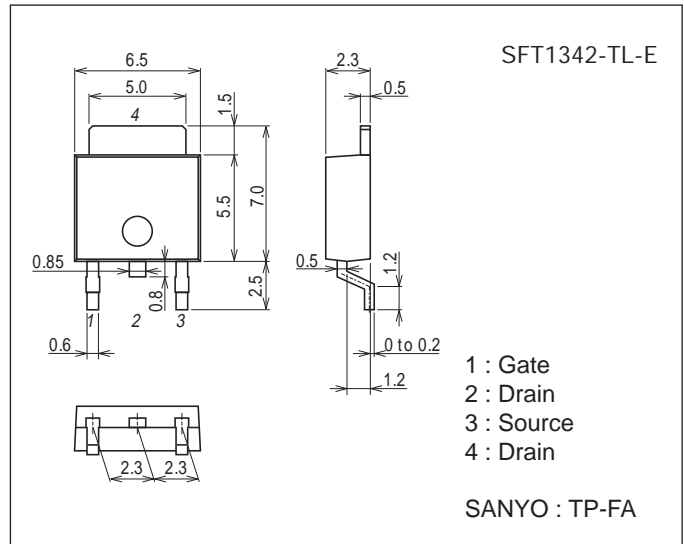
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		-60	V
Gate-to-Source Voltage	VGSS		±20	V
Drain Current (DC)	ID		-12	A
Drain Current (PW≤10μs)	IDP	PW≤10μs, duty cycle≤1%	-48	A
Allowable Power Dissipation	PD		1.0	W
		Tc=25°C	15	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions unit : mm (typ)  
7518-004



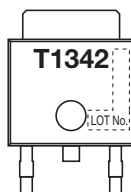
Package Dimensions unit : mm (typ)  
7003-004



### Product & Package Information

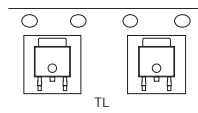
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

Marking  
(TP, TP-FA)

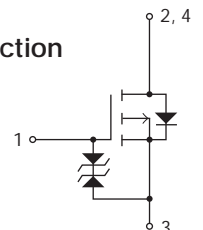


- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

Packing Type (TP-FA) : TL



Electrical Connection

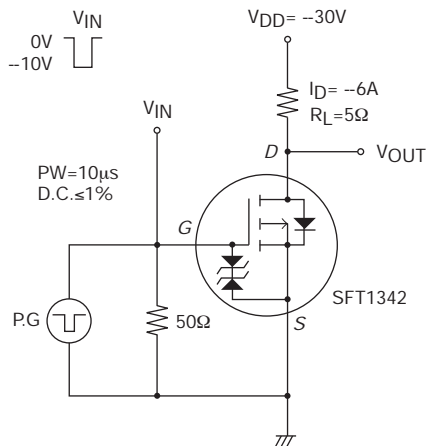


# SFT1342

## Electrical Characteristics at Ta=25°C

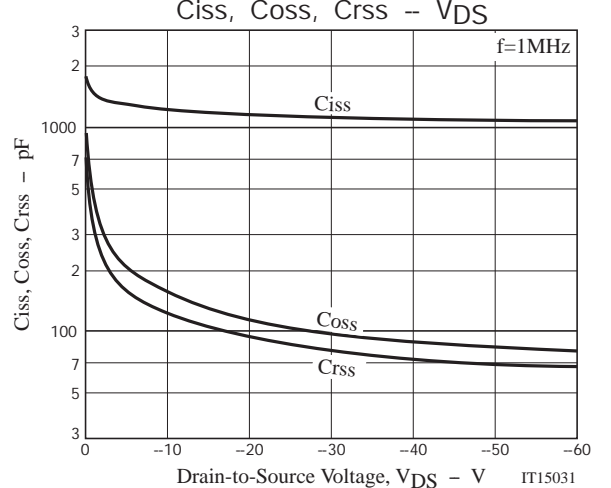
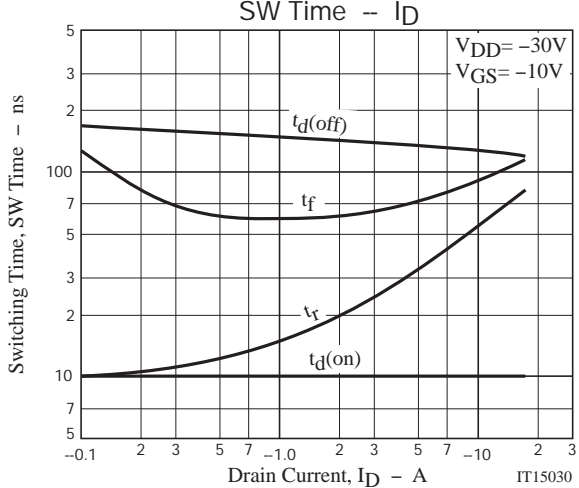
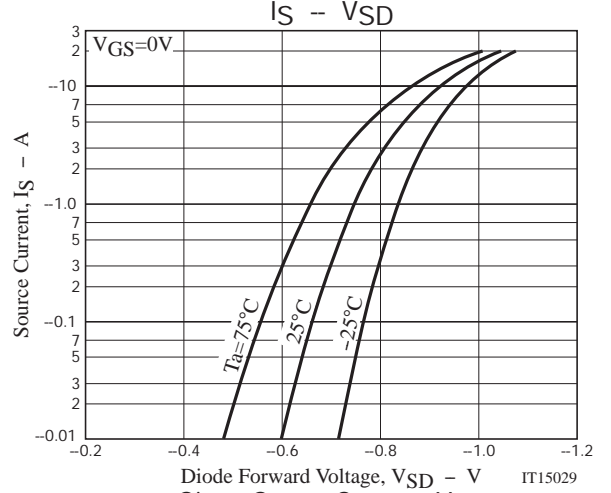
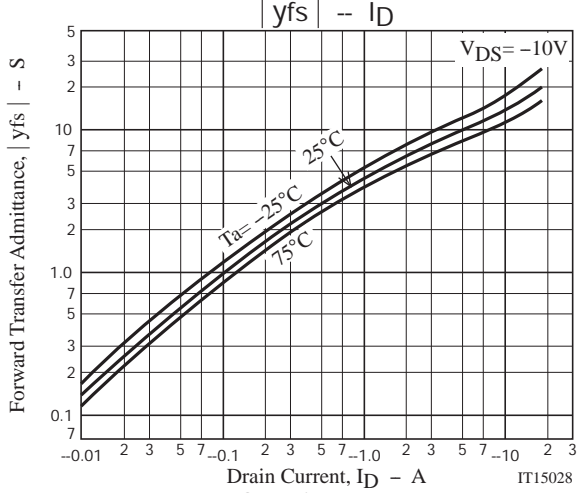
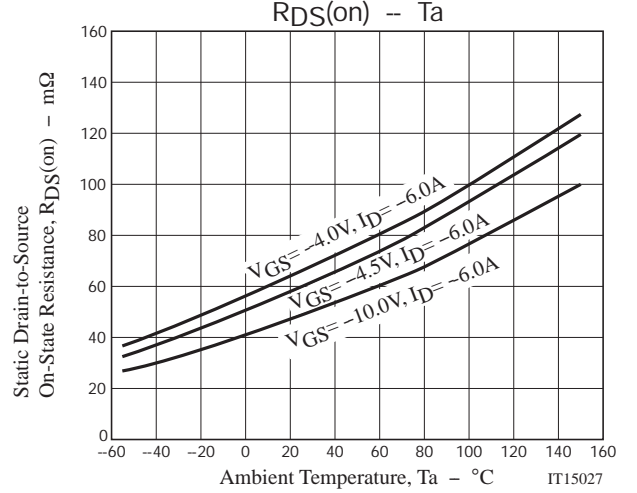
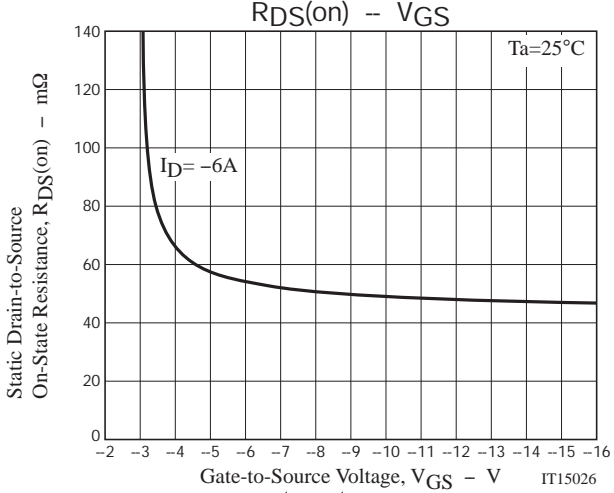
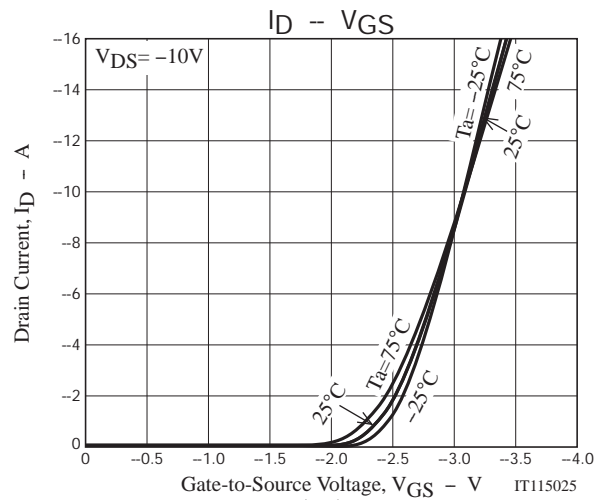
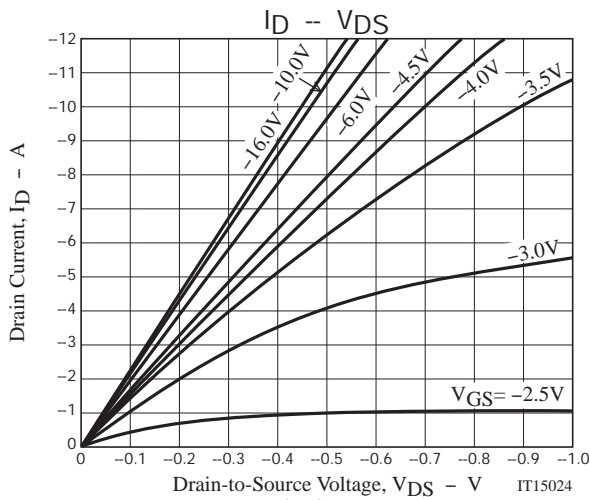
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I <sub>D</sub> =-1mA, V <sub>GS</sub> =0V	-60			V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =-60V, V <sub>GS</sub> =0V			-1	μA
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <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> =-6A		11		S
Static Drain-to-Source On-State Resistance	R <sub>DS(on)1</sub>	I <sub>D</sub> =-6A, V <sub>GS</sub> =-10V		47	62	mΩ
	R <sub>DS(on)2</sub>	I <sub>D</sub> =-6A, V <sub>GS</sub> =-4.5V		62	87	mΩ
	R <sub>DS(on)3</sub>	I <sub>D</sub> =-6A, V <sub>GS</sub> =-4V		68	96	mΩ
Input Capacitance	C <sub>iss</sub>			1150		pF
Output Capacitance	C <sub>oss</sub>	V <sub>DS</sub> =-20V, f=1MHz		115		pF
Reverse Transfer Capacitance	C <sub>rss</sub>			95		pF
Turn-ON Delay Time	t <sub>d(on)</sub>	See specified Test Circuit.		10		ns
Rise Time	t <sub>r</sub>			37		ns
Turn-OFF Delay Time	t <sub>d(off)</sub>			135		ns
Fall Time	t <sub>f</sub>			75		ns
Total Gate Charge	Q <sub>g</sub>				26	
Gate-to-Source Charge	Q <sub>gs</sub>	V <sub>DS</sub> =-30V, V <sub>GS</sub> =-10V, I <sub>D</sub> =-12A		3.5		nC
Gate-to-Drain "Miller" Charge	Q <sub>gd</sub>			5		nC
Diode Forward Voltage	V <sub>SD</sub>		I <sub>S</sub> =-12A, V <sub>GS</sub> =0V		-0.95	-1.2

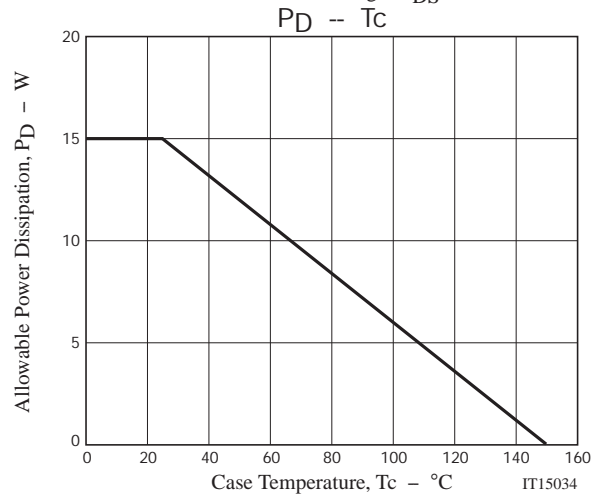
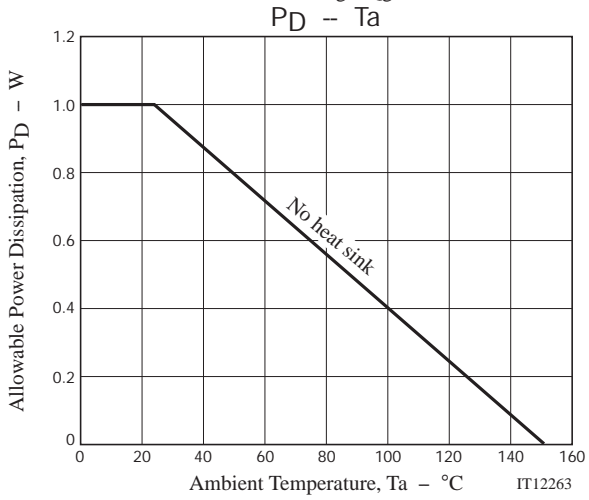
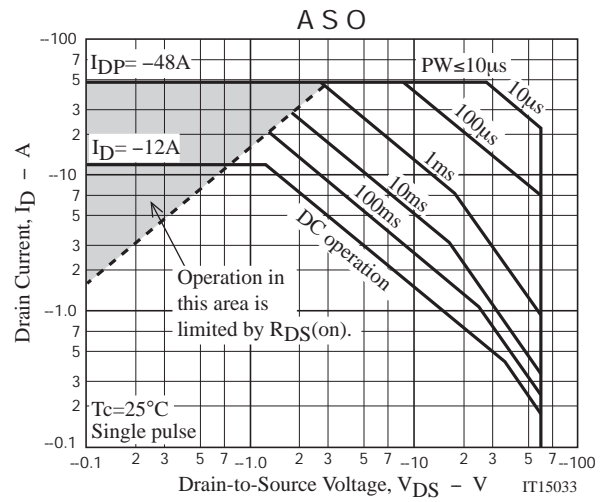
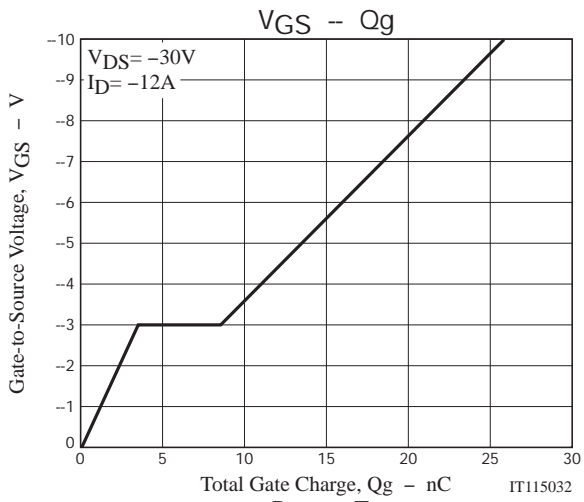
## Switching Time Test Circuit



## Ordering Information

Device	Package	Shipping	memo
SFT1342-E	TP	500pcs./bag	Pb Free
SFT1342-TL-E	TP-FA	700pcs./reel	





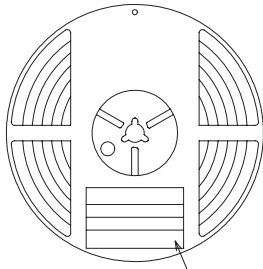
Taping Specification

SFT1342-TL-E

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)
TP-FA	TP	700	2,100	12,600	3 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



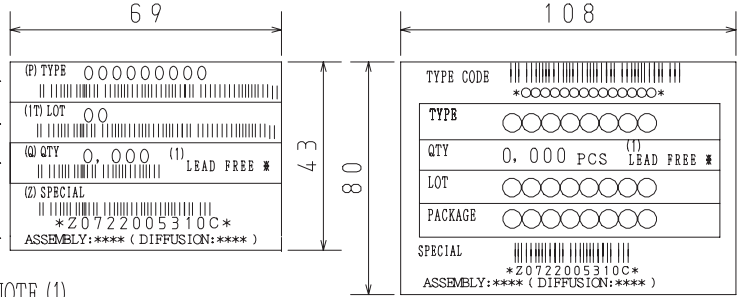
Type No.  
LOT No.  
Quantity  
Origin

Reel label

Reel label, Inner box label  
(unit:mm)

Outer box label

It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.



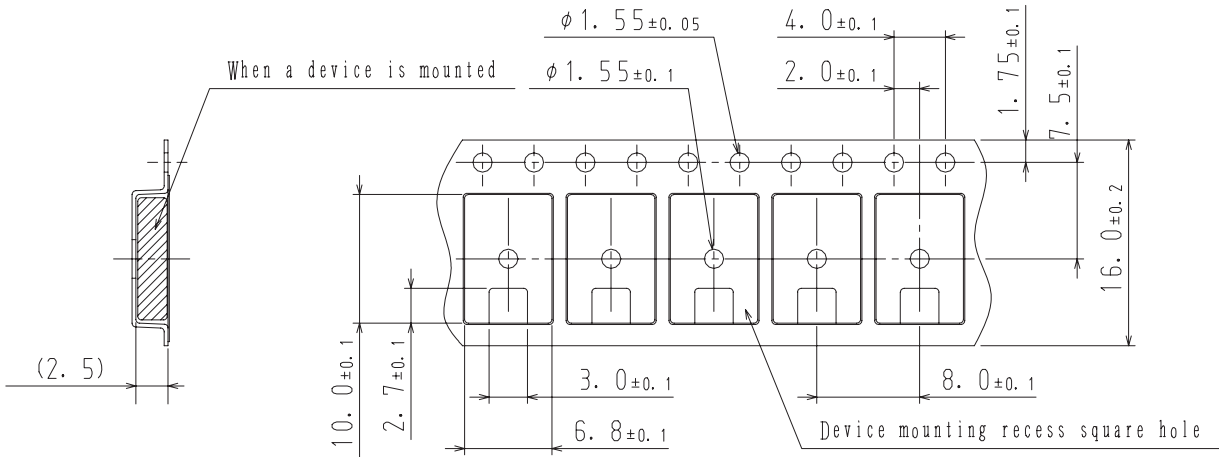
NOTE (1)

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

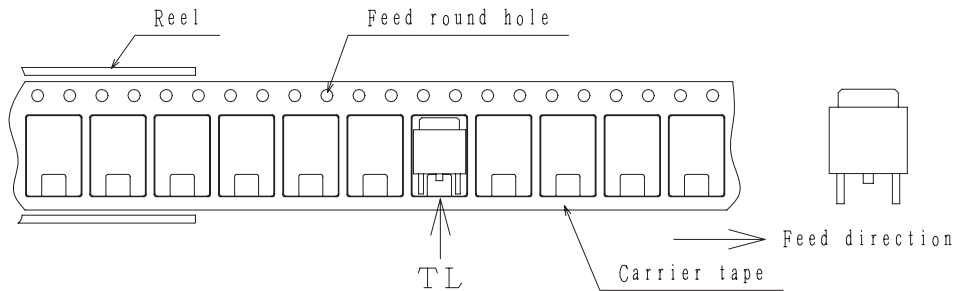
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

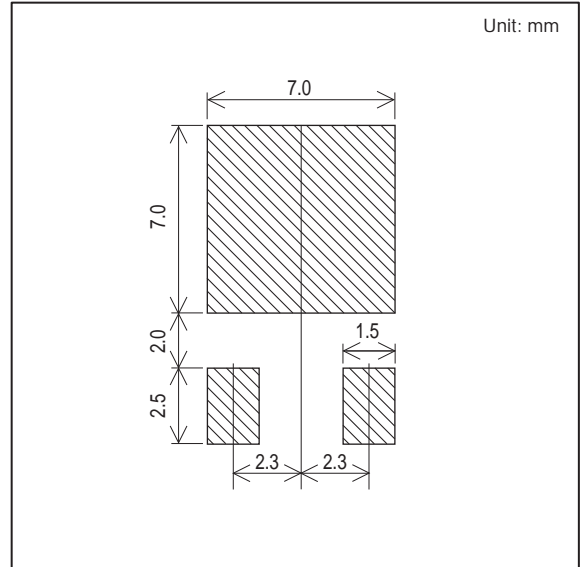
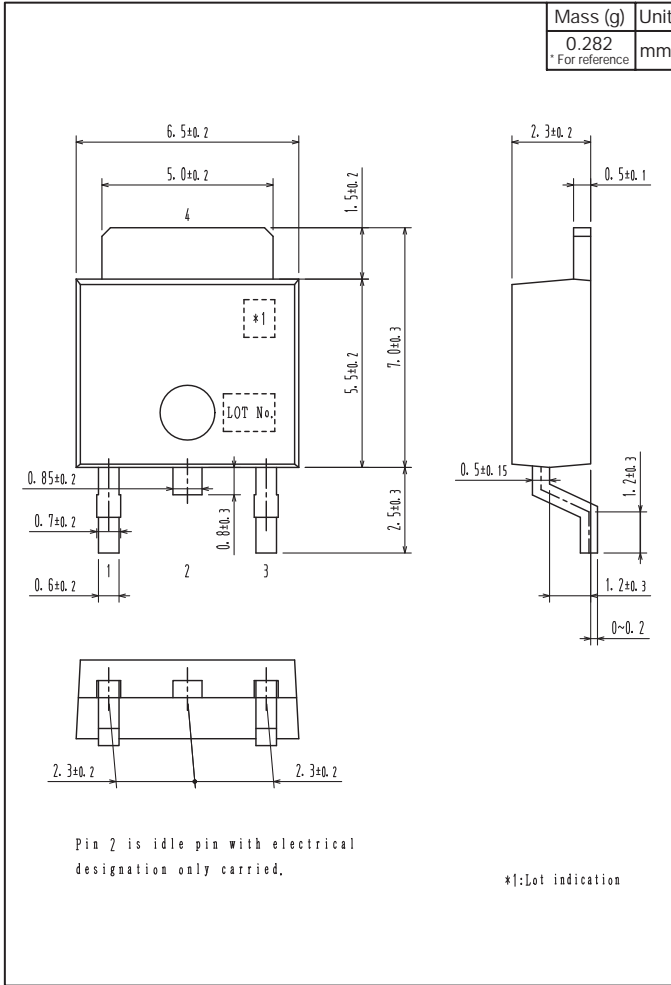


Those with one electrode terminal on the feed hole side.....TL

# SFT1342

## Outline Drawing SFT1342-TL-E

## Land Pattern Example



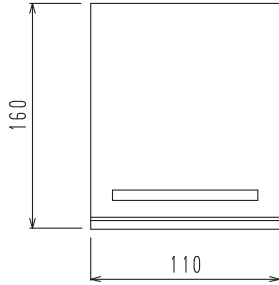
Bag Packing Specification

SFT1342-E

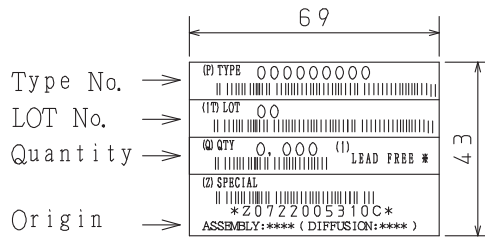
1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			
	Bag	Inner box	Outer box	
TP	500	B-1	A-1	A-2
		10,000	50,000	30,000
Packing format (Dimensions:mm (external))				
		Inner box	Outer box	
		B-1	A-1	A-2
		445×225×55	470×250×300	470×250×190

2. Bag dimensions  
(unit:mm)



3. Bag label, Inner box label  
(unit:mm)



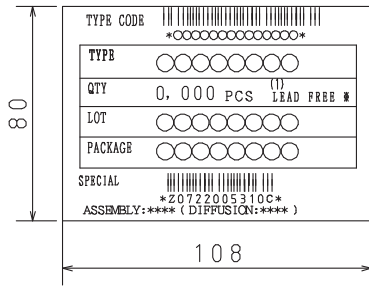
4. Outer box label  
(unit:mm)

It is a label at the time of factory shipments,  
The form of a label may change in physical  
distribution process.

NOTE (1)

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

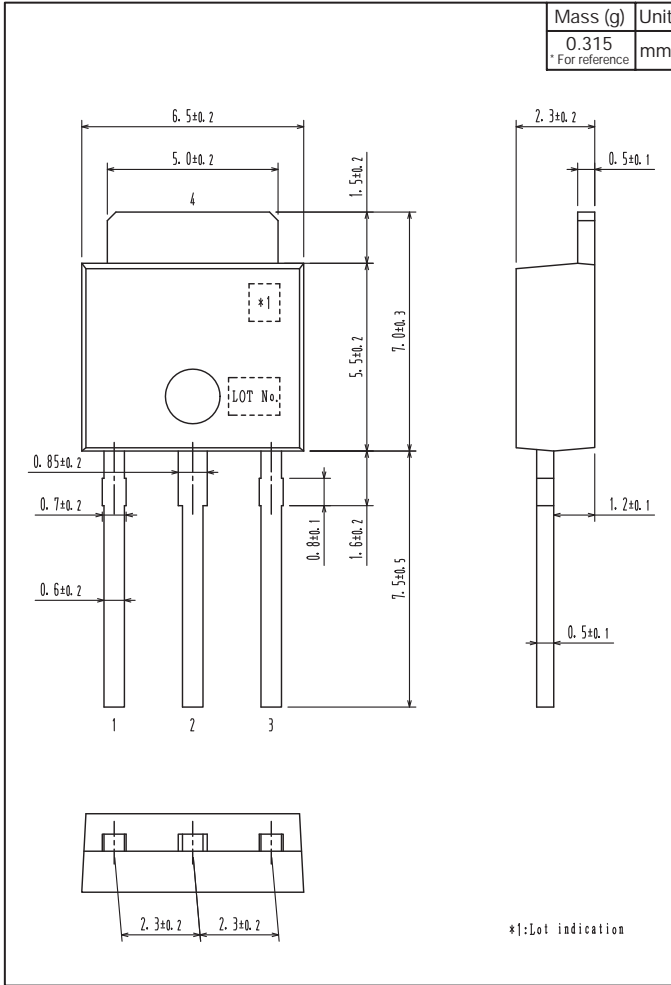
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



# SFT1342

## Outline Drawing

SFT1342-E





Note on usage : Since the SFT1342 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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**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.