



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

P-Channel Silicon MOSFET

SFT1342 — General-Purpose Switching Device Applications

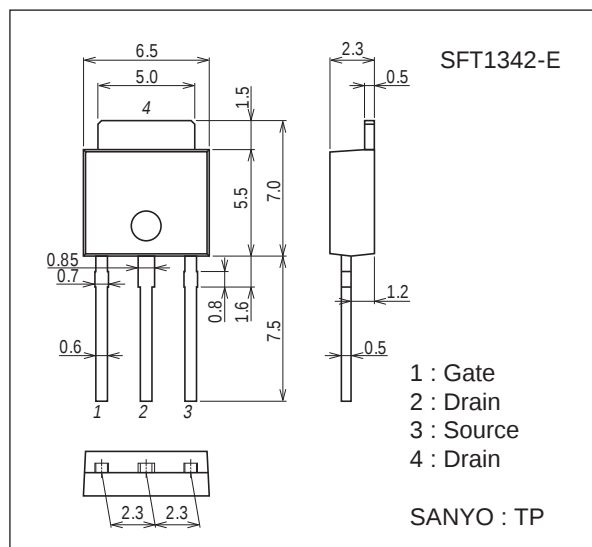
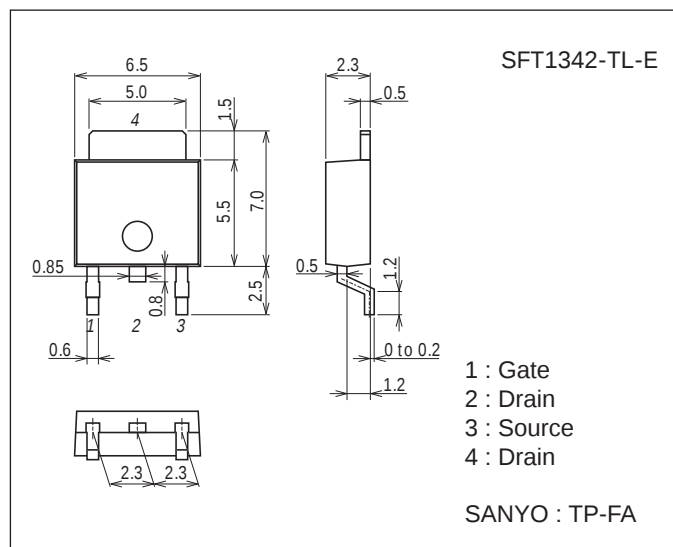
Features

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

Specifications

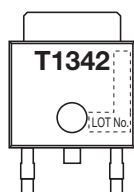
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DS}		-60	V
Gate-to-Source Voltage	V_{GS}		± 20	V
Drain Current (DC)	I_D		-12	A
Drain Current (PW $\leq 10\mu\text{s}$)	I_{DP}	PW $\leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-48	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c=25^\circ\text{C}$	15	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

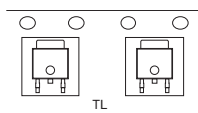
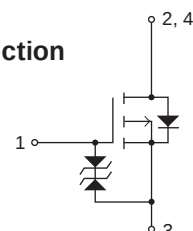
Package Dimensions unit : mm (typ)
7518-004

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


SANYO Semiconductor Co., Ltd.

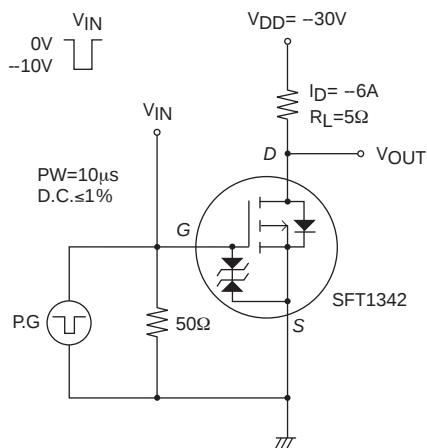
<http://semicon.sanyo.com/en/network>

SFT1342

Electrical Characteristics at Ta=25°C

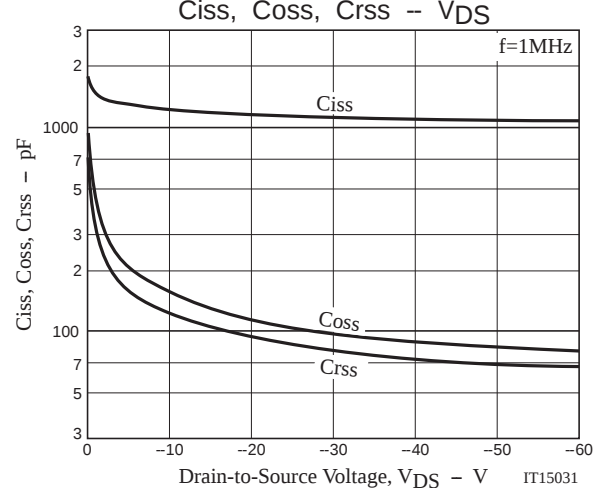
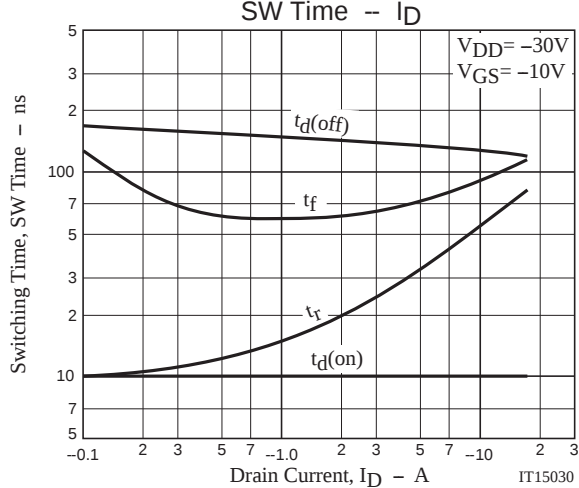
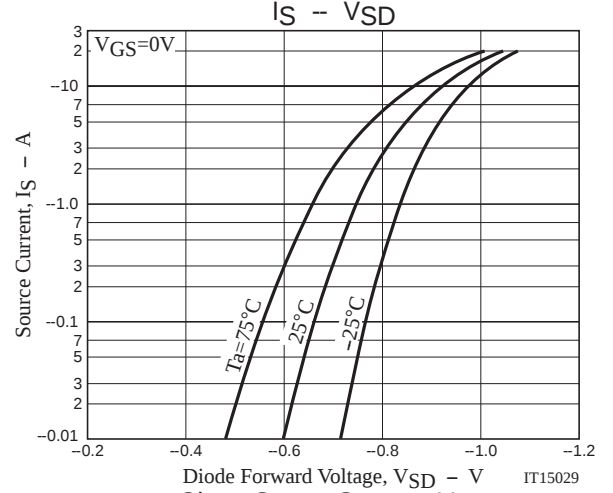
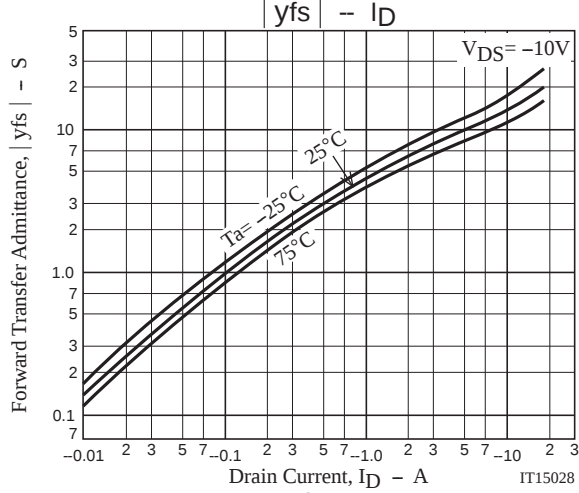
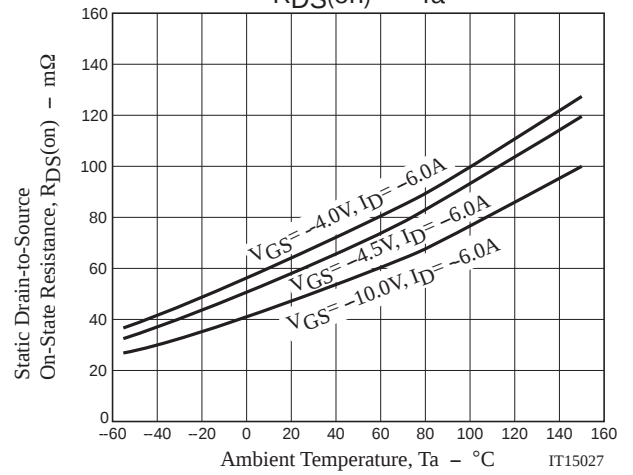
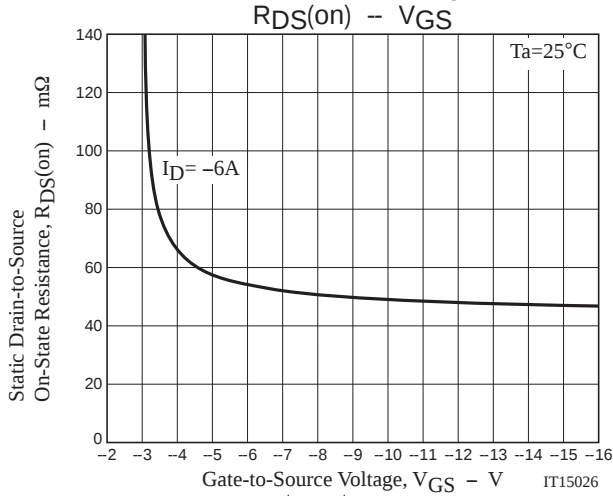
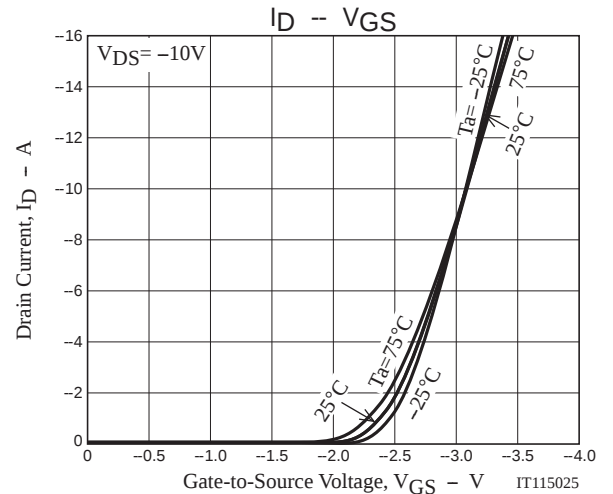
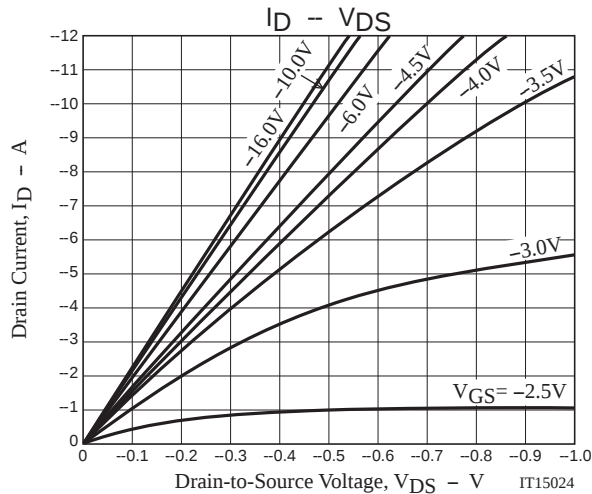
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1mA, V_{GS} = 0V$	-60			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60V, V_{GS} = 0V$			-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0V$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10V, I_D = -1mA$	-1.2		-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V, I_D = -6A$		11		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D = -6A, V_{GS} = -10V$		47	62	m Ω
	$R_{DS(on)2}$	$I_D = -6A, V_{GS} = -4.5V$		62	87	m Ω
	$R_{DS(on)3}$	$I_D = -6A, V_{GS} = -4V$		68	96	m Ω
Input Capacitance	C_{iss}	$V_{DS} = -20V, f = 1MHz$		1150		pF
Output Capacitance	C_{oss}			115		pF
Reverse Transfer Capacitance	C_{rss}			95		pF
Turn-ON Delay Time	$t_d(on)$			10		ns
Rise Time	t_r	See specified Test Circuit.		37		ns
Turn-OFF Delay Time	$t_d(off)$			135		ns
Fall Time	t_f			75		ns
Total Gate Charge	Q_g			26		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS} = -30V, V_{GS} = -10V, I_D = -12A$		3.5		nC
Gate-to-Drain "Miller" Charge	Q_{gd}			5		nC
Diode Forward Voltage	V_{SD}	$I_S = -12A, V_{GS} = 0V$		-0.95	-1.2	V

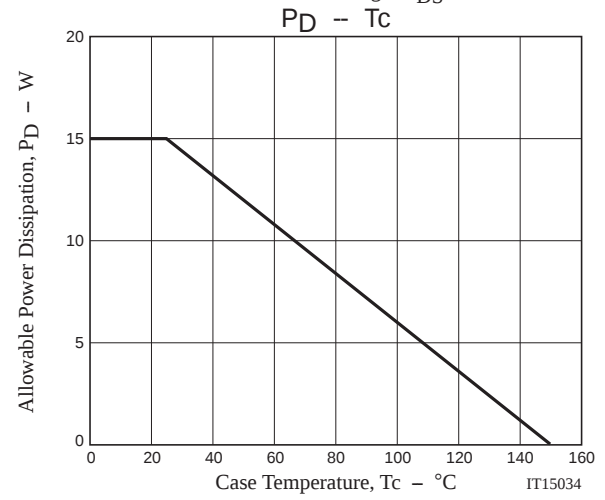
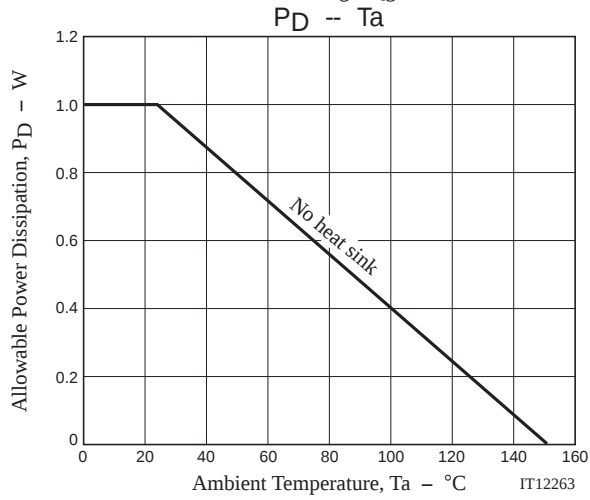
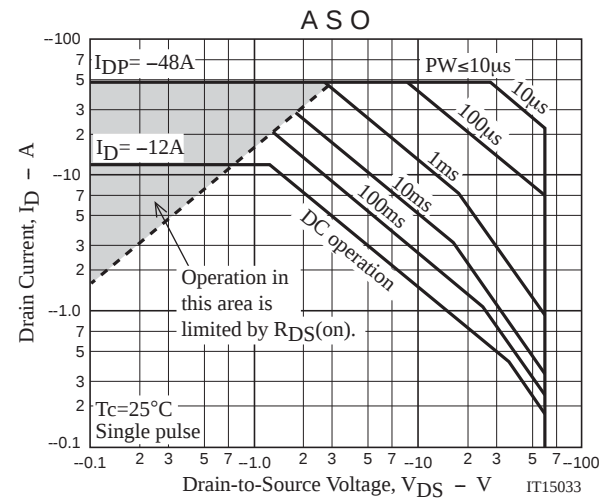
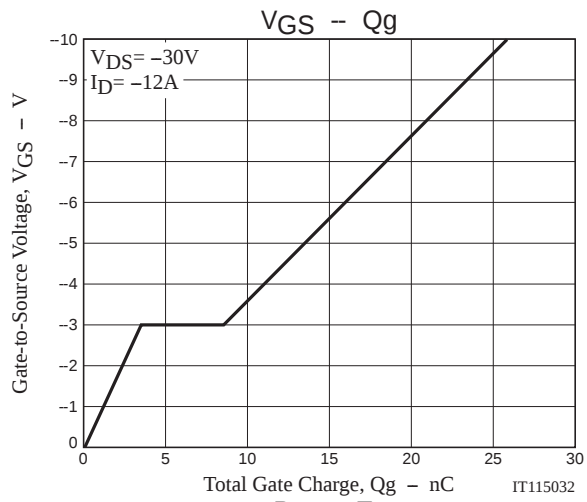
Switching Time Test Circuit



Ordering Information

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





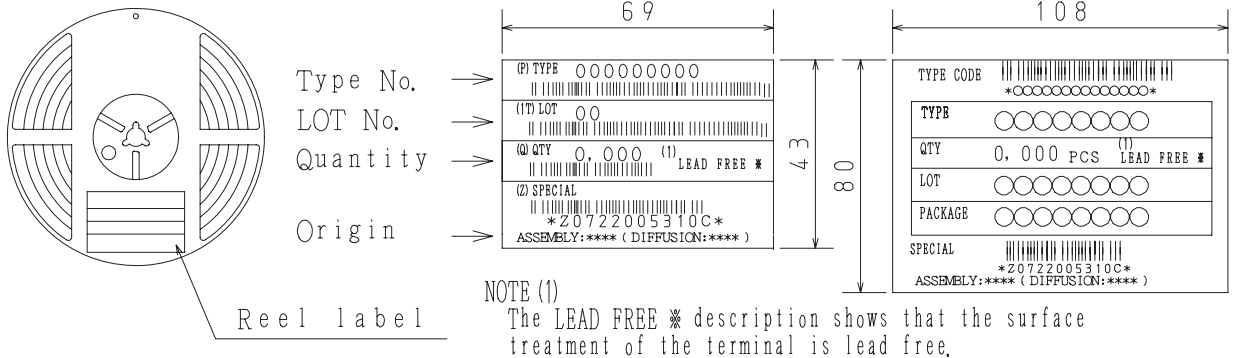
Taping Specification

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

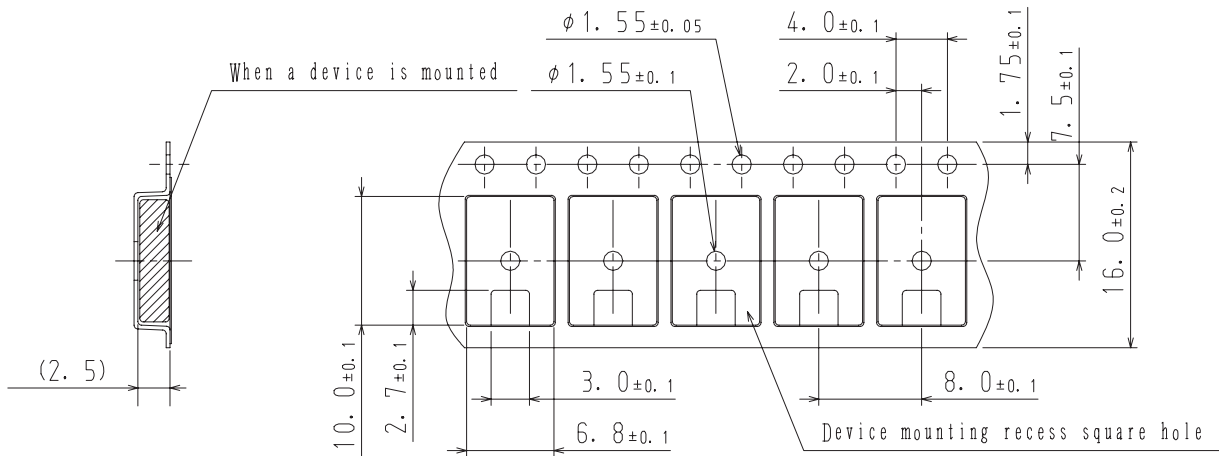
Packing method



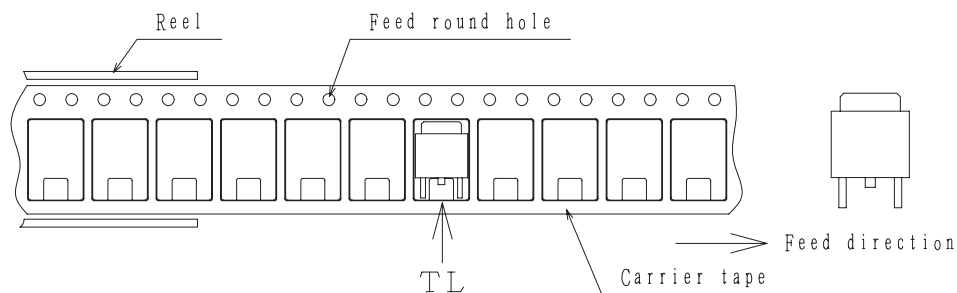
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



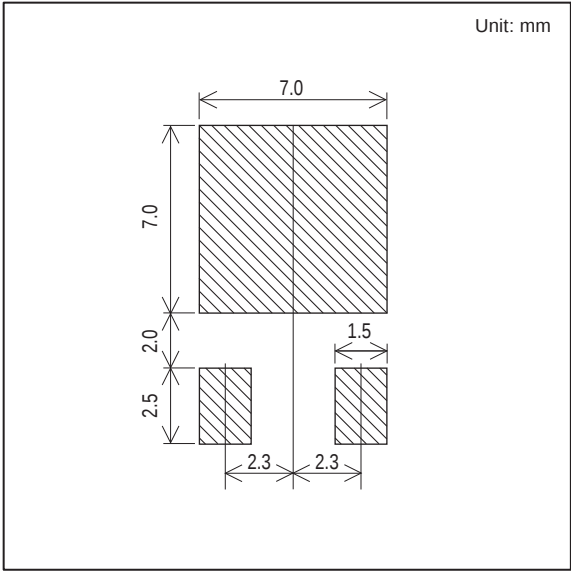
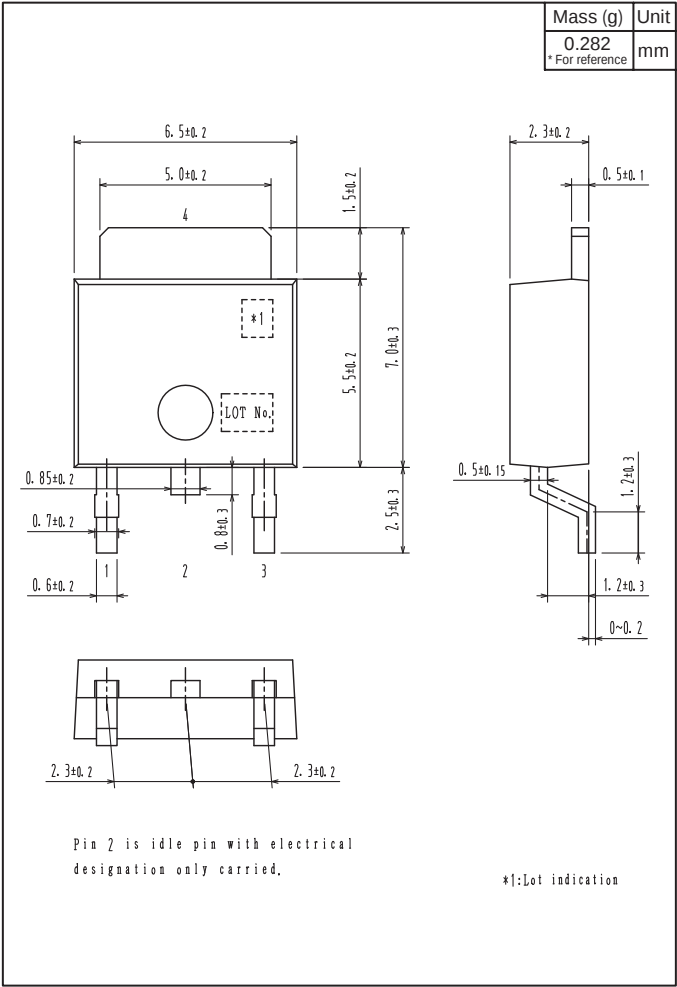
2. Device placement direction



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

Outline Drawing
SFT1342-TL-E

Land Pattern Example

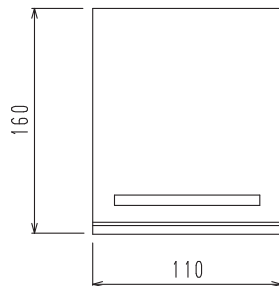
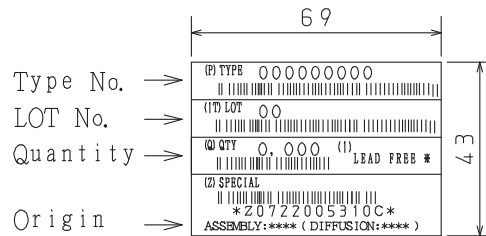


Bag Packing Specification

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

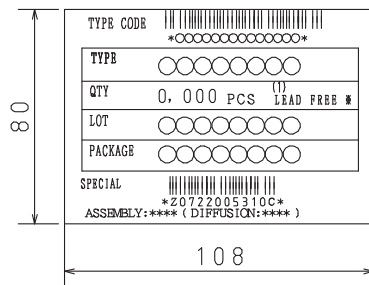
2. Bag dimensions
(unit:mm)3. Bag label, Inner box label
(unit:mm)4. Outer box label
(unit:mm)

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

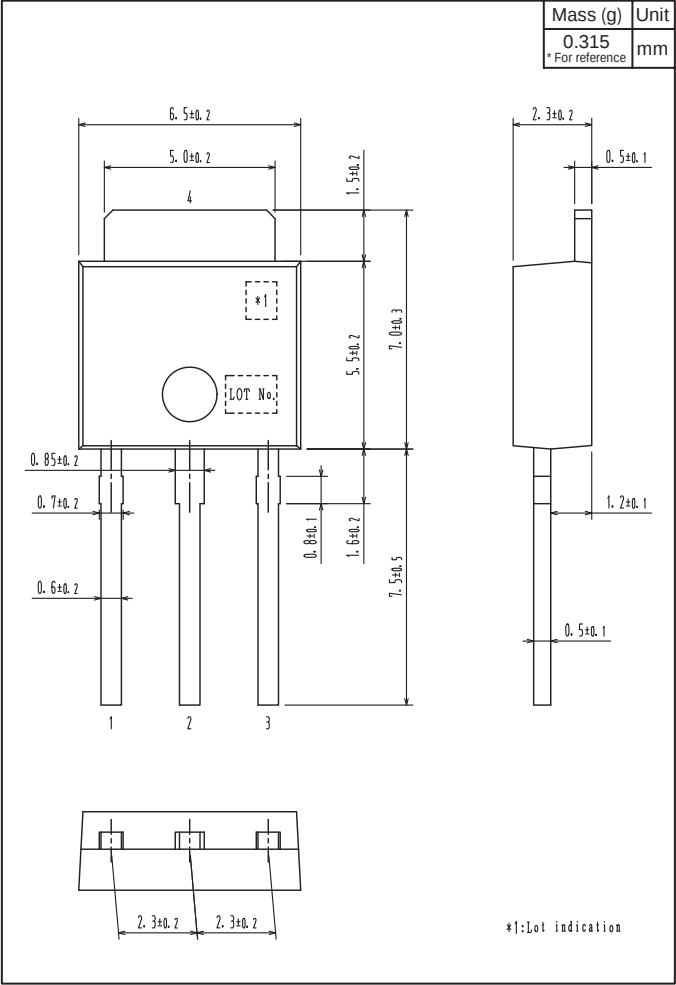
NOTE (1)

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



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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