



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SFT1350 — P-Channel Silicon MOSFET — General-Purpose Switching Device Applications

Features

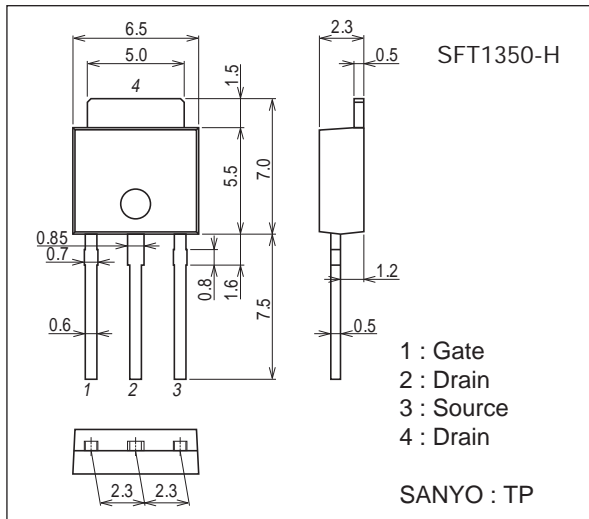
- ON-resistance $R_{DS(on)} = 45m\Omega$ (typ.)
- Input Capacitance $C_{iss} = 590pF$ (typ.)
- 4.5V drive
- Halogen free compliance
- Protection diode in

Specifications

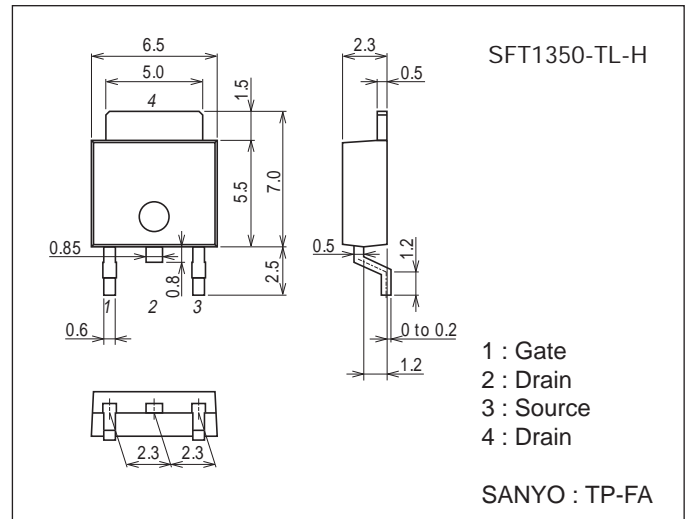
Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-40	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-19	A
Drain Current (PW $\leq 10\mu s$)	I_{DP}	PW $\leq 10\mu s$, duty cycle $\leq 1\%$	-76	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c = 25^\circ C$	23	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions unit : mm (typ)
7518-004



Package Dimensions unit : mm (typ)
7003-004

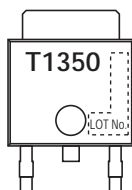


Product & Package Information

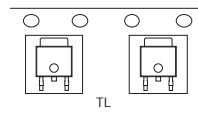
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

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

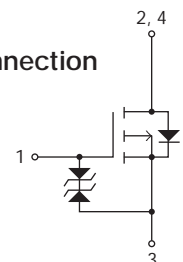
Marking
(TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection

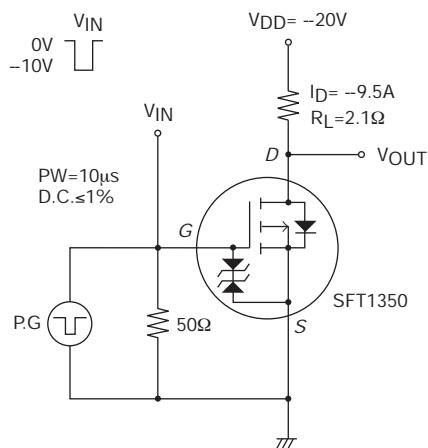


SFT1350

Electrical Characteristics at Ta=25°C

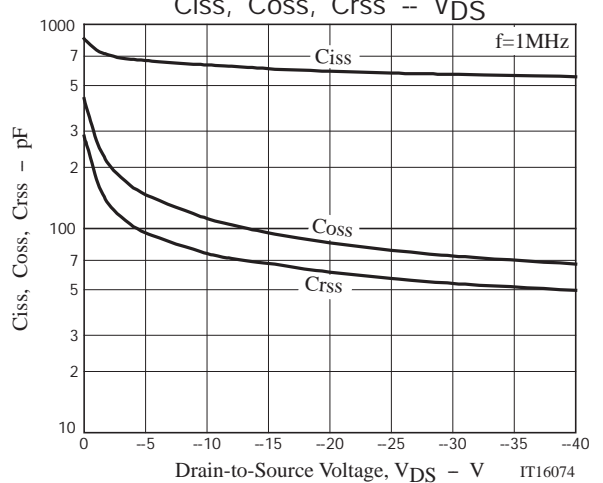
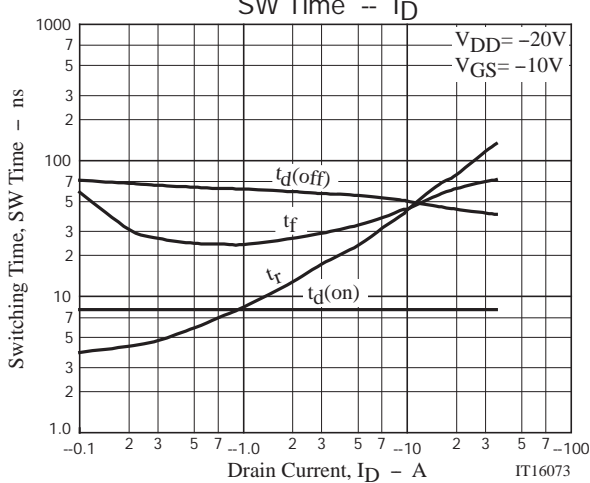
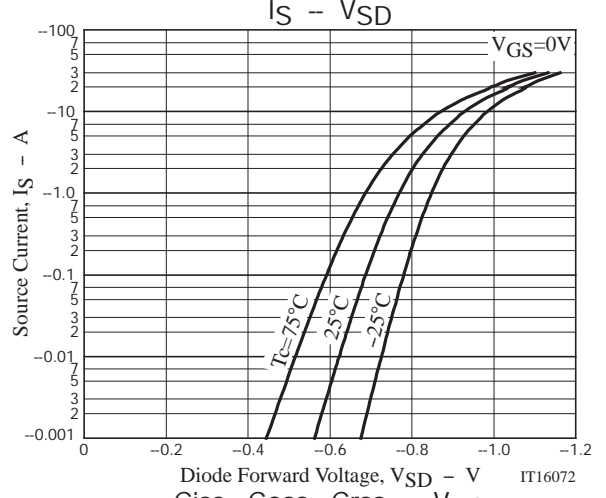
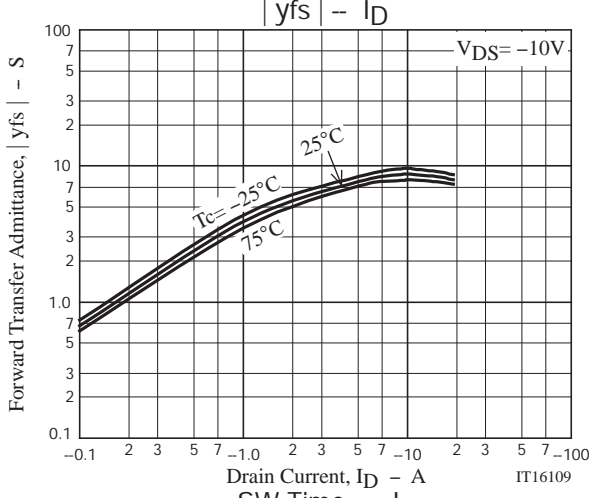
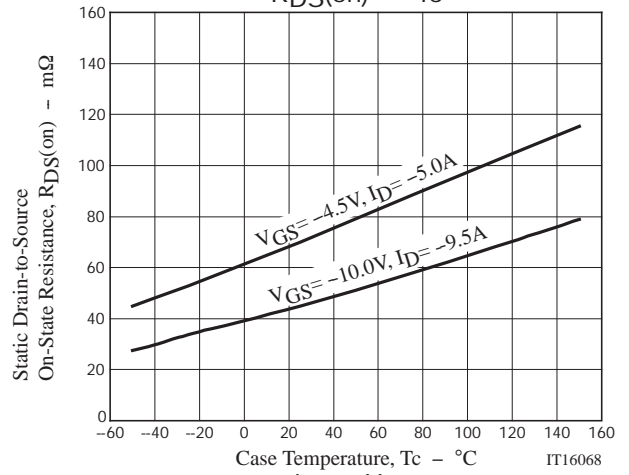
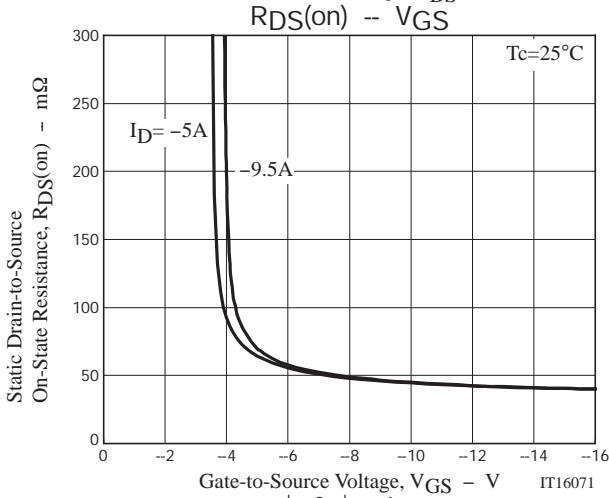
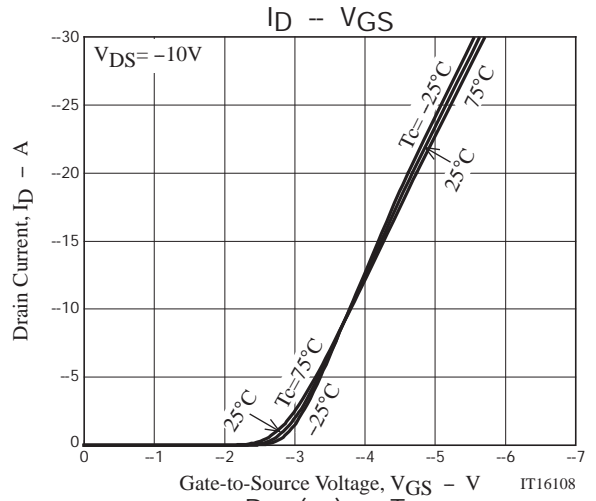
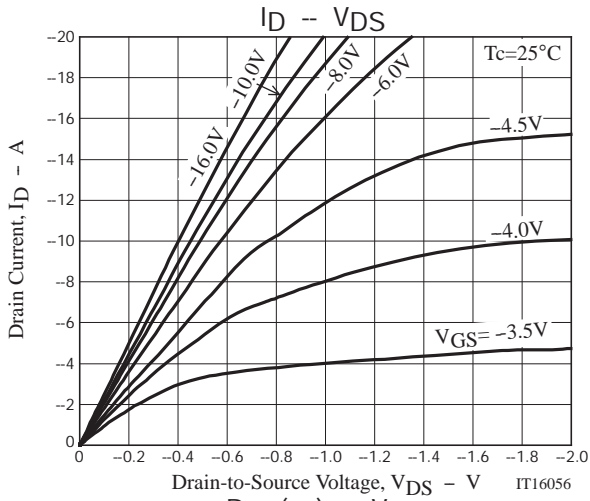
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =-1mA, V _{GS} =0V	-40			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-40V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.7		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-9.5A		8.7		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-9.5A, V _{GS} =-10V		45	59	mΩ
	R _{DS(on)2}	I _D =-5A, V _{GS} =-4.5V		73	105	mΩ
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		590		pF
Output Capacitance	C _{oss}			85		pF
Reverse Transfer Capacitance	C _{rss}			61		pF
Turn-ON Delay Time	t _{d(on)}			8		ns
Rise Time	t _r	See specified Test Circuit.		40		ns
Turn-OFF Delay Time	t _{d(off)}			52		ns
Fall Time	t _f			44		ns
Total Gate Charge	Q _g			12		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-20V, V _{GS} =-10V, I _D =-19A		3.6		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			2.0		nC
Diode Forward Voltage	V _{SD}		I _S =-19A, V _{GS} =0V	-1.03	-1.2	

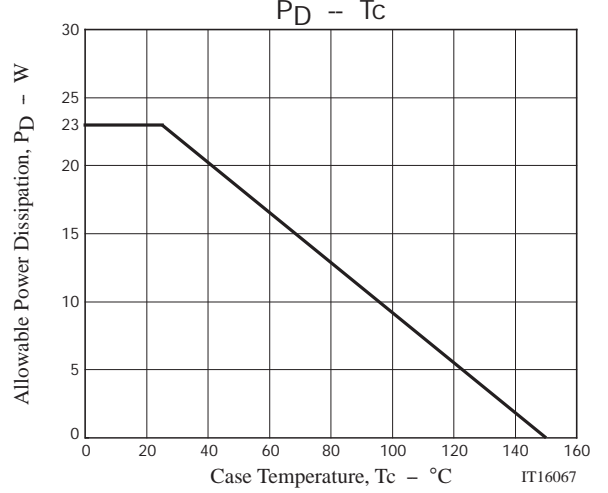
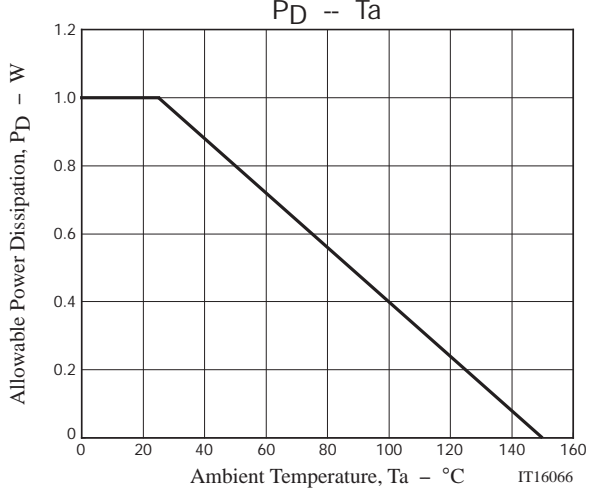
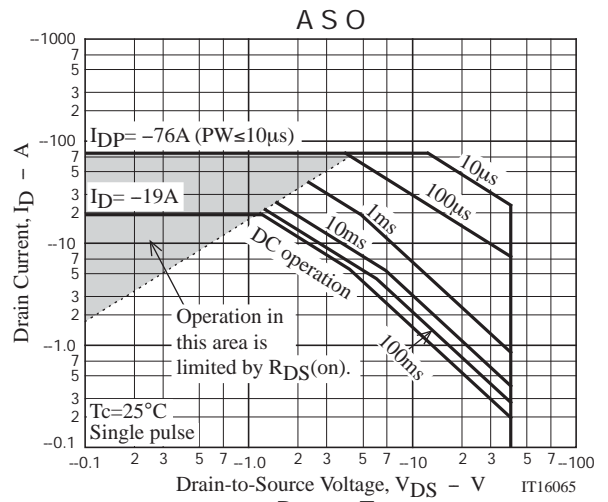
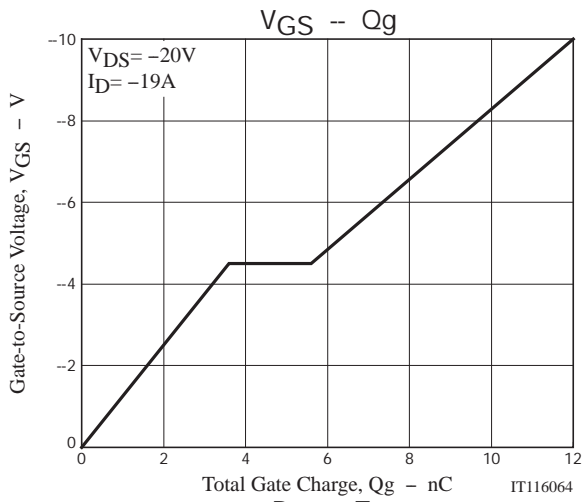
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
SFT1350-H	TP	500pcs./bag	Pb Free and Halogen Free
SFT1350-TL-H	TP-FA	700pcs./reel	





Taping Specification

SFT1350-TL-H

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



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.

Reel label details:
 Type No. → (P) TYPE 00000000
 LOT No. → (1) LOT 00
 Quantity → (Q) QTY 0,000 (1) LEAD FREE *
 Origin → (Z) SPECIAL *Z0722005310C* ASSEMBLY:**** (DIFFUSION:****)

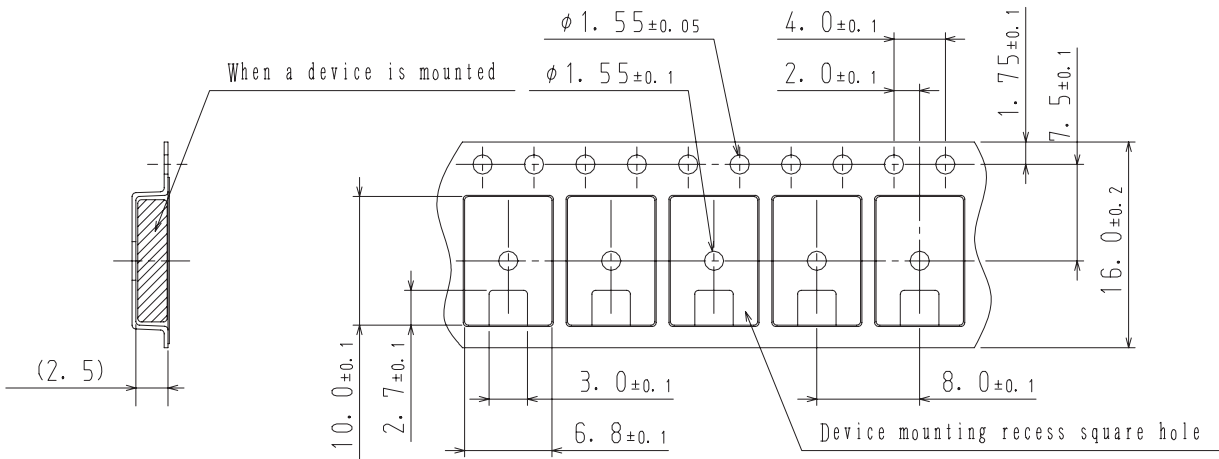
Inner box label details:
 TYPE CODE
 TYPE ○○○○○○
 QTY 0,000 PCS (1) LEAD FREE *
 LOT ○○○○○○
 PACKAGE ○○○○○○
 SPECIAL *Z0722005310C* ASSEMBLY:**** (DIFFUSION:****)

NOTE (1)
The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

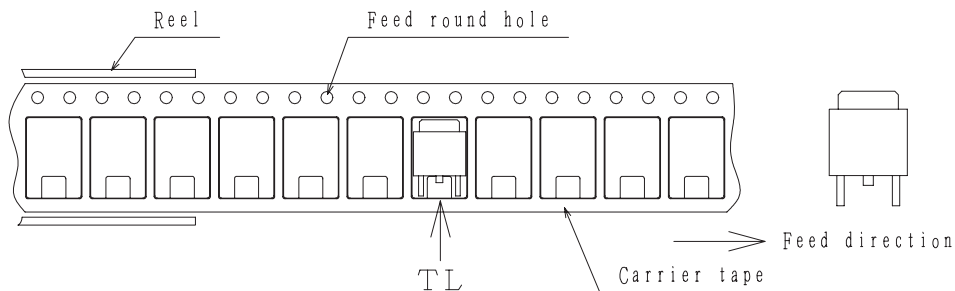
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

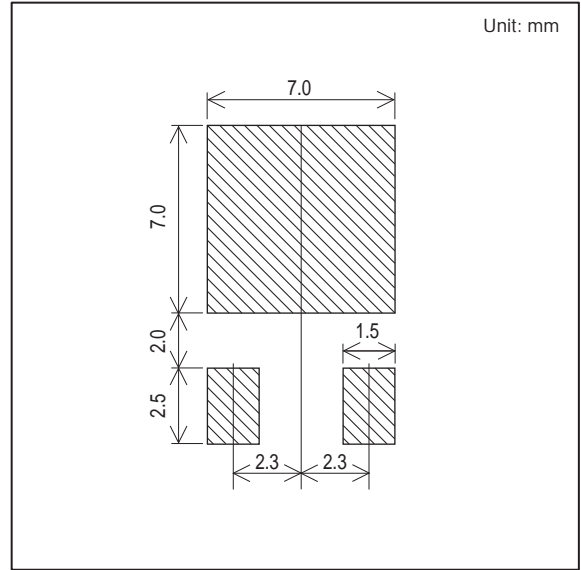
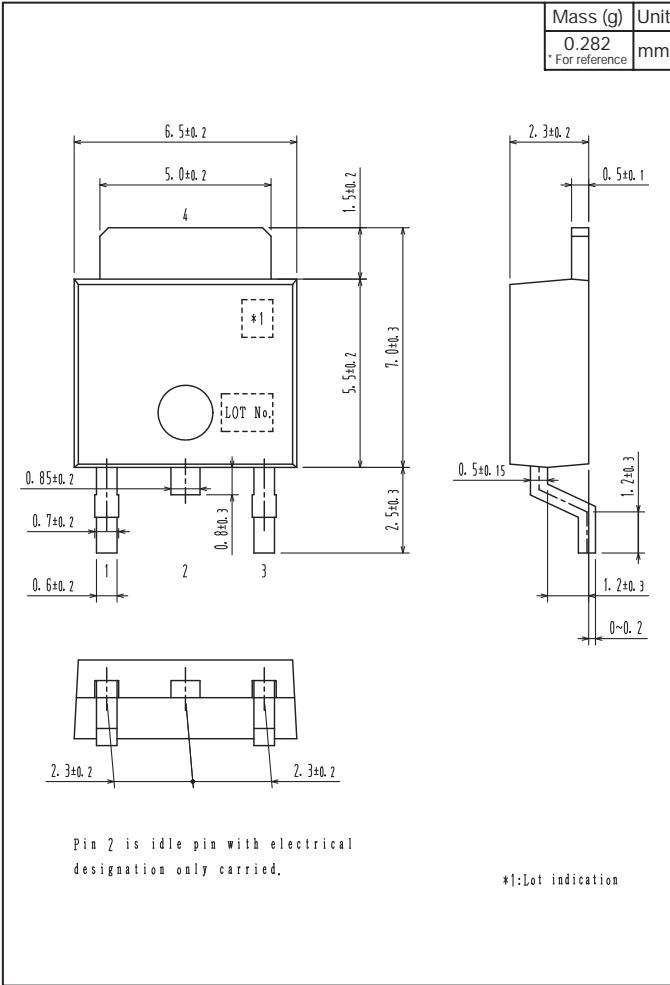


Those with one electrode terminal on the feed hole side.....TL

SFT1350

Outline Drawing SFT1350-TL-H

Land Pattern Example



SFT1350

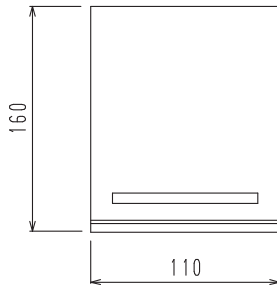
Bag Packing Specification

SFT1350-H

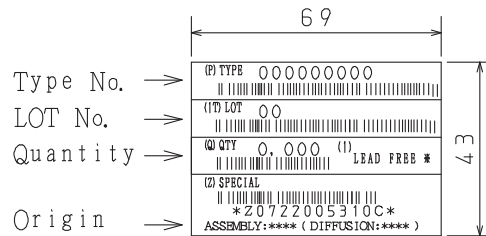
1. Packing Format

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)



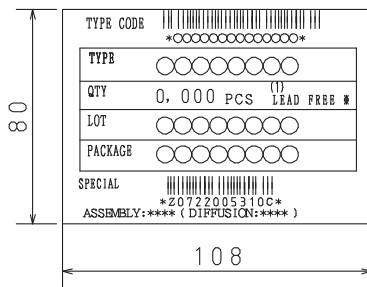
4. Outer box label (unit:mm)

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.

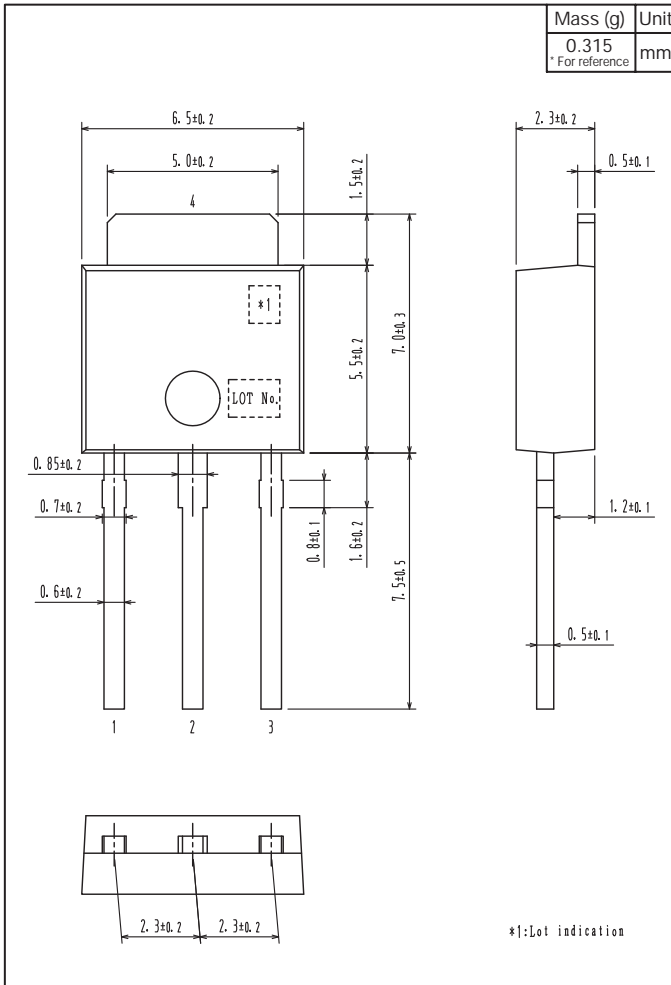
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



SFT1350

Outline Drawing

SFT1350-H



Note on usage : Since the SFT1350 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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