



SFT1443 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

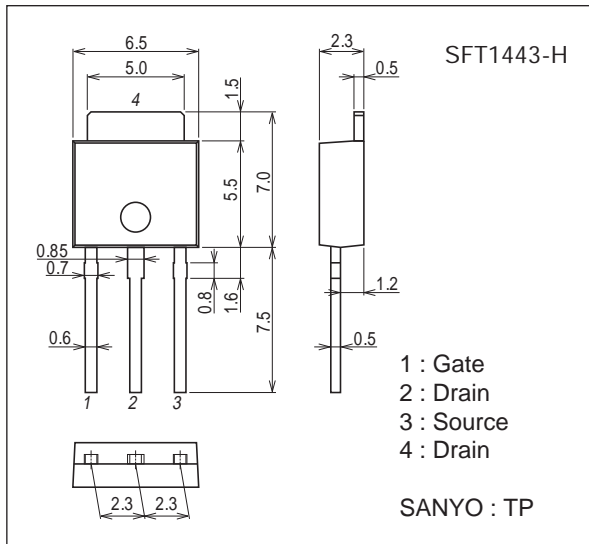
- ON-resistance $R_{DS(on)} = 180\text{m}\Omega(\text{typ.})$
- Input Capacitance $C_{iss} = 490\text{pF}(\text{typ.})$
- 4V drive
- Halogen free compliance
- Protection diode in

Specifications

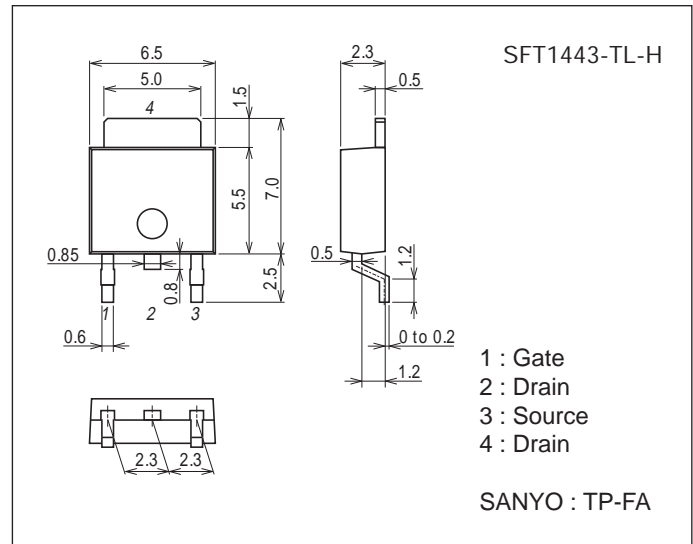
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		100	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		9	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	36	A
Allowable Power Dissipation	P_D		1	W
		$T_c = 25^\circ\text{C}$	19	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



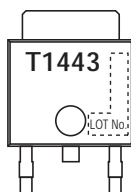
Package Dimensions unit : mm (typ)
7003-004



Product & Package Information

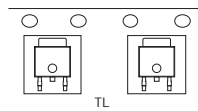
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

Marking
(TP, TP-FA)

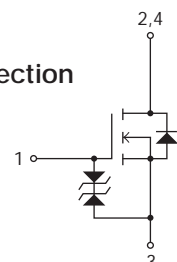


- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

Packing Type (TP-FA) : TL



Electrical Connection

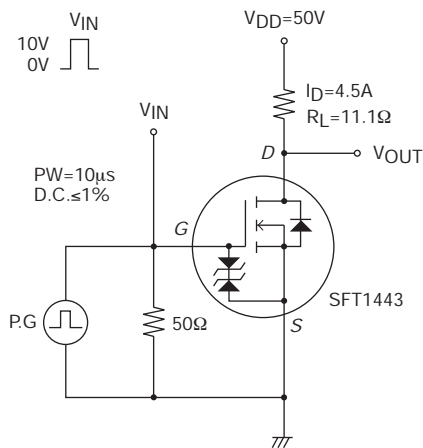


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Electrical Characteristics at Ta=25°C

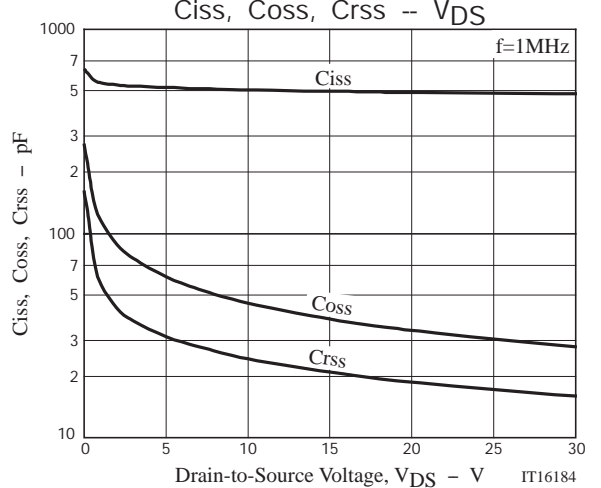
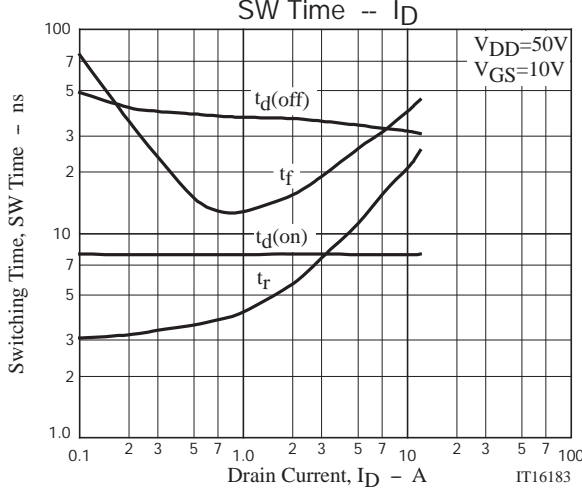
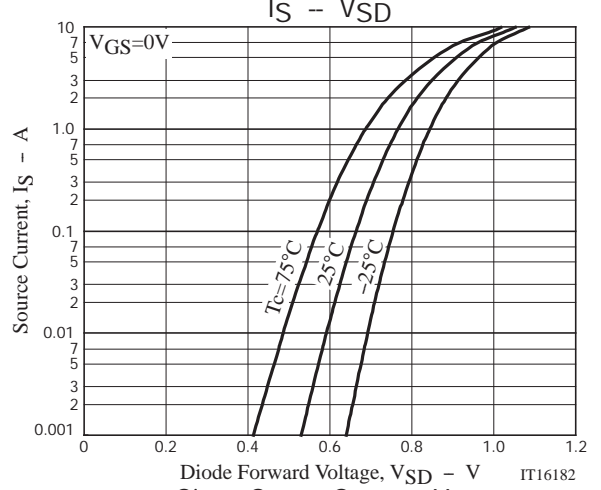
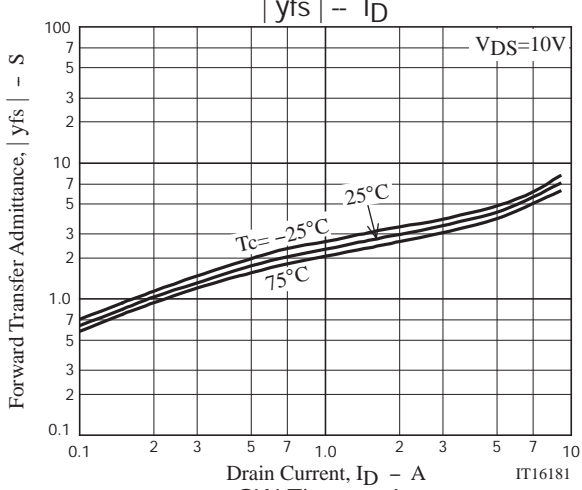
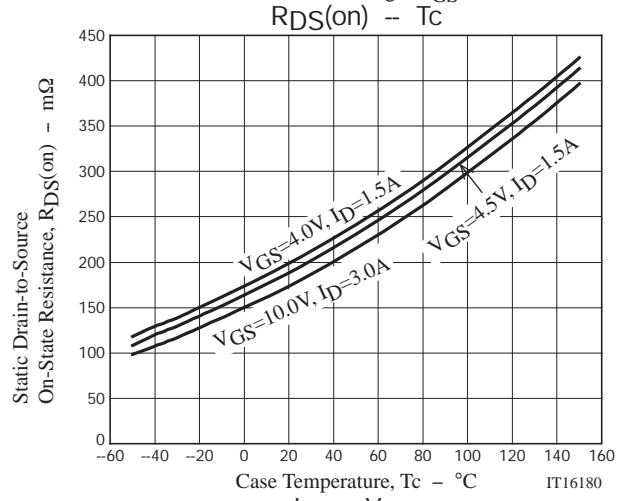
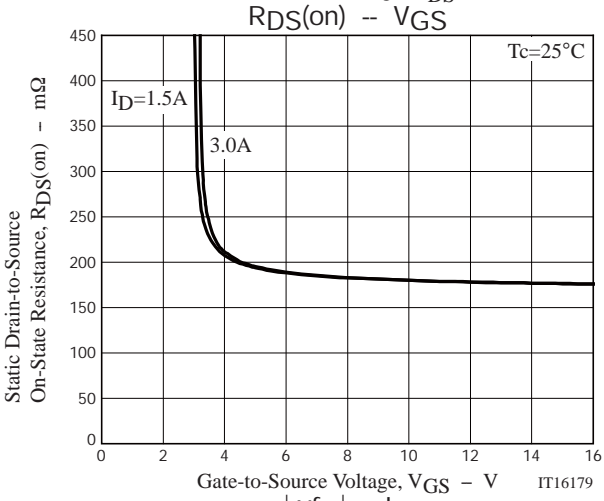
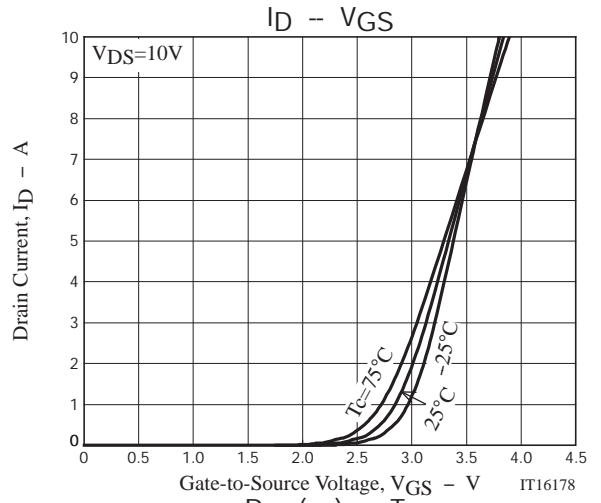
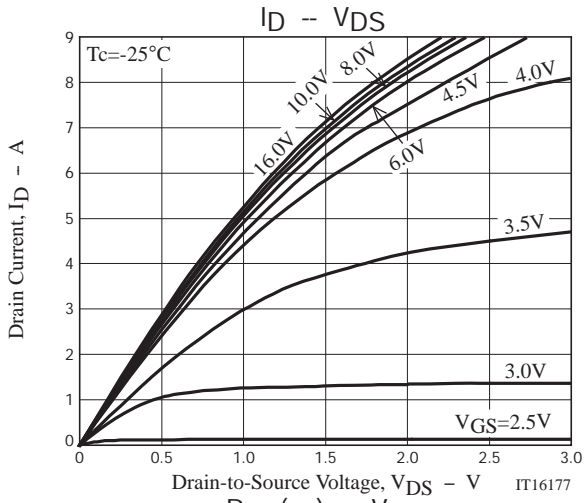
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0V	100			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =100V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	1.5		2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =4.5A		4		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =3A, V _{GS} =10V		180	225	mΩ
	R _{DS(on)2}	I _D =1.5A, V _{GS} =4.5V		195	275	mΩ
	R _{DS(on)3}	I _D =1.5A, V _{GS} =4V		205	290	mΩ
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		490		pF
Output Capacitance	C _{oss}			34		pF
Reverse Transfer Capacitance	C _{rss}			19		pF
Turn-ON Delay Time	t _{d(on)}		See specified Test Circuit.		8	
Rise Time	t _r			10		ns
Turn-OFF Delay Time	t _{d(off)}			34		ns
Fall Time	t _f			24		ns
Total Gate Charge	Q _g	V _{DS} =50V, V _{GS} =10V, I _D =9A			9.8	
Gate-to-Source Charge	Q _{gs}			1.8		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			1.6		nC
Diode Forward Voltage	V _{SD}	I _S =9A, V _{GS} =0V		1.03	1.2	V

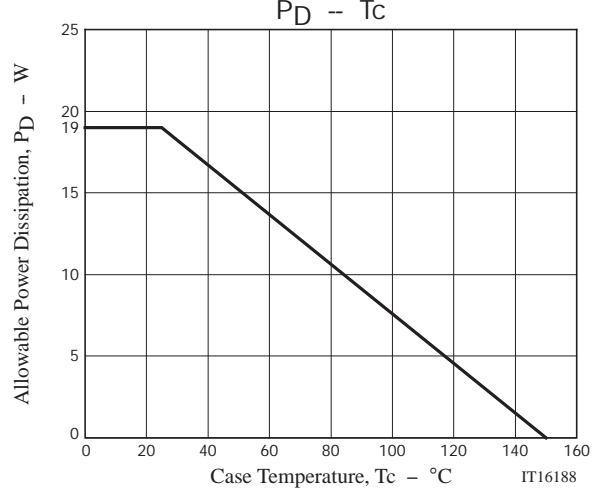
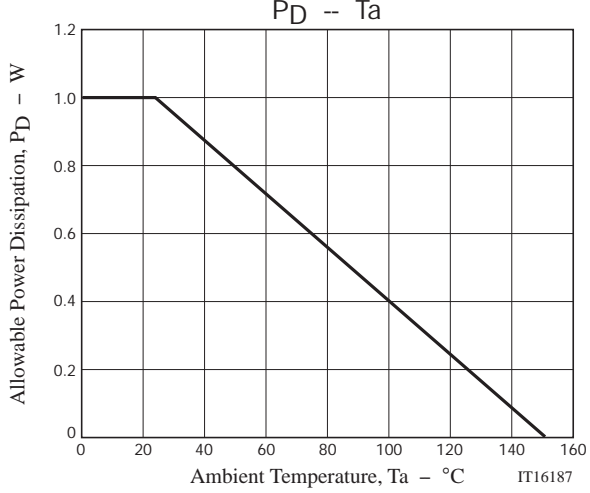
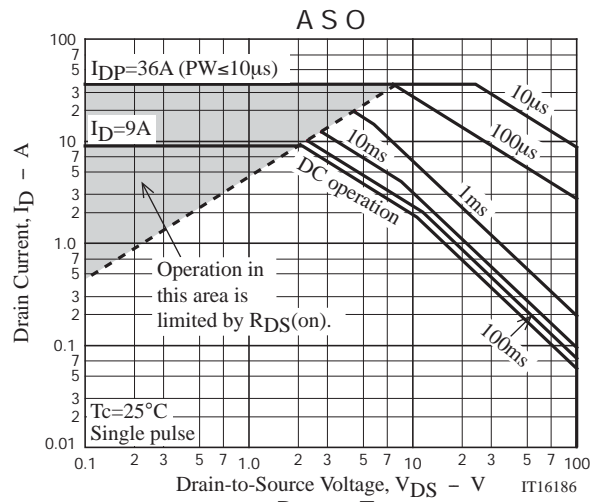
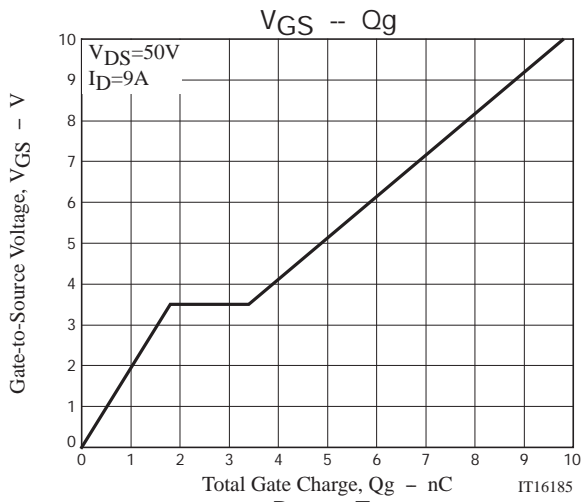
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
SFT1443-H	TP	500pcs./bag	Pb Free and Halogen Free
SFT1443-TL-H	TP-FA	700pcs./reel	





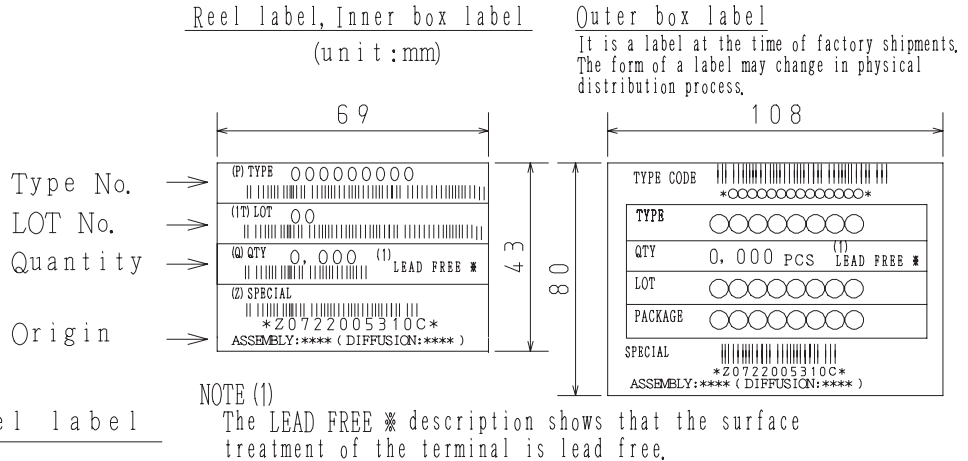
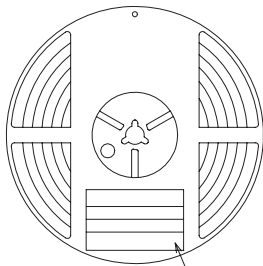
Taping Specification

SFT1443-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

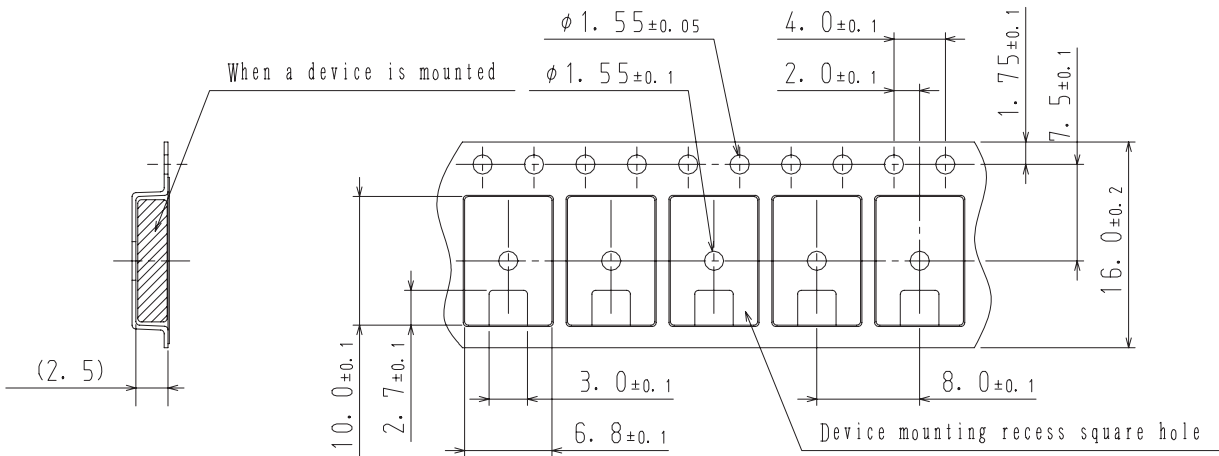


NOTE (1)
The LEAD FREE # description shows that the surface treatment of the terminal is lead free.

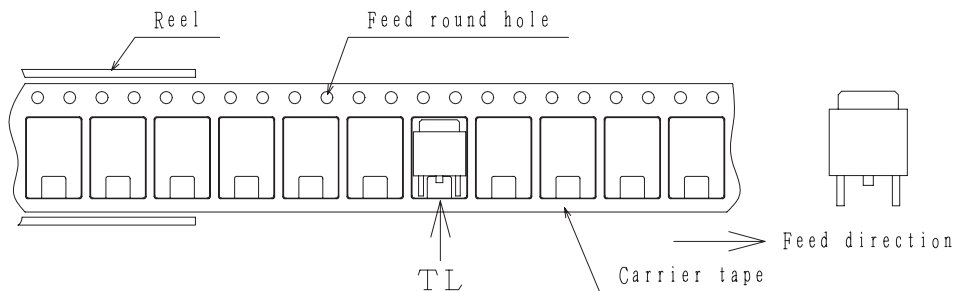
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

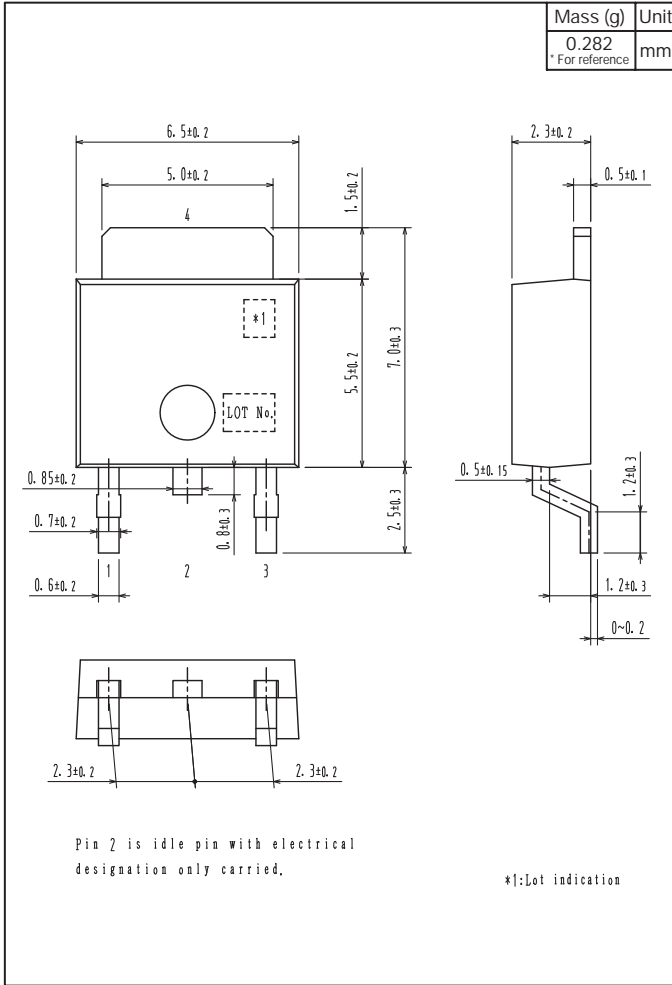


Those with one electrode terminal on the feed hole side.....TL

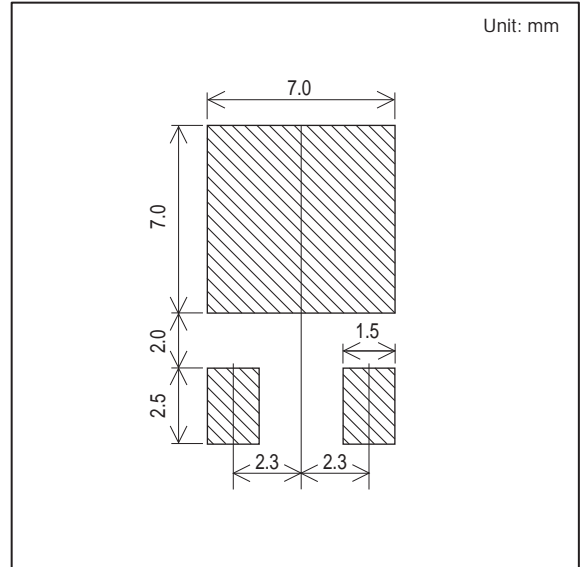
SFT1443

Outline Drawing

SFT1443-TL-H



Land Pattern Example



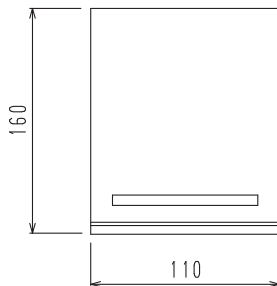
Bag Packing Specification

SFT1443-H

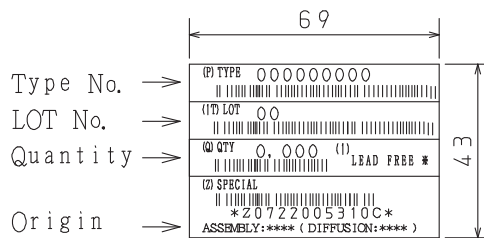
1. Packing Format

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)



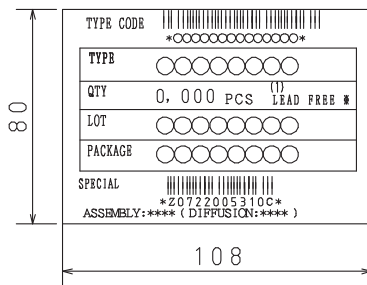
4. Outer box label
(unit:mm)

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.

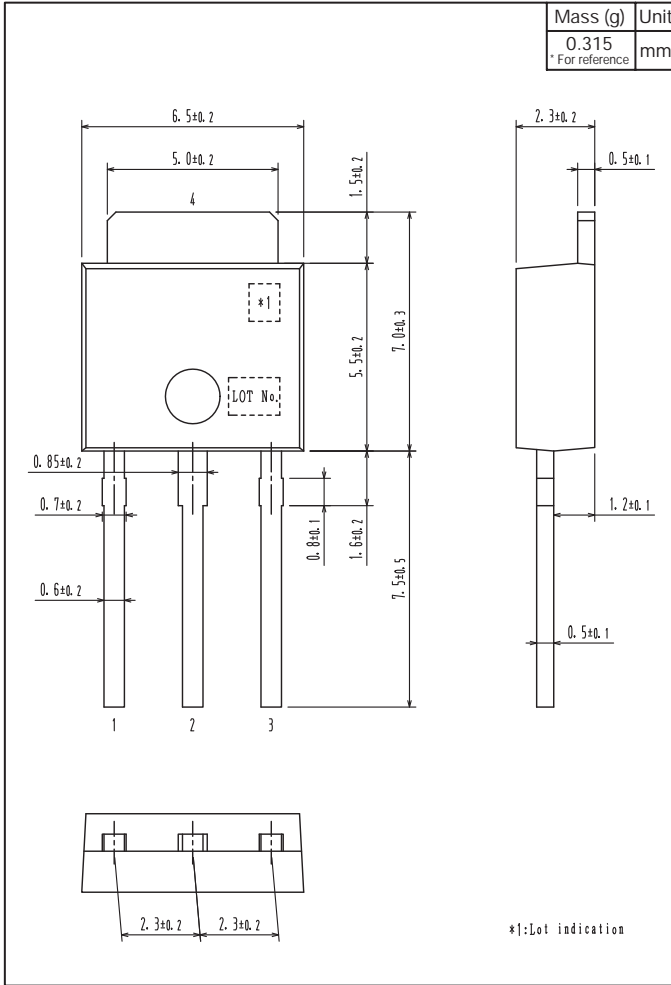
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



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Outline Drawing

SFT1443-H



Note on usage : Since the SFT1443 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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