



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SFT1445 — N-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

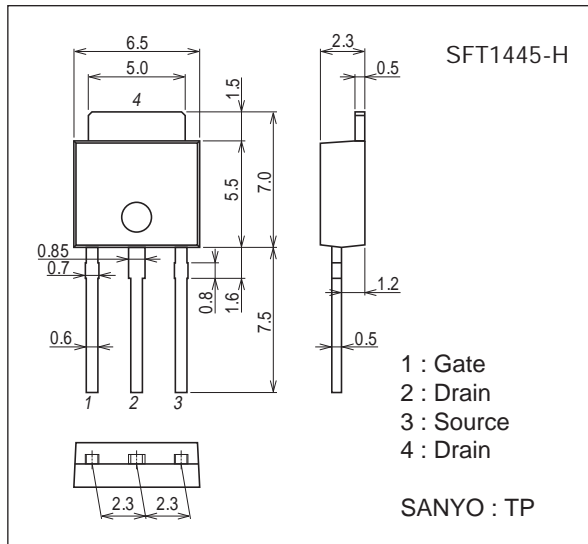
- ON-resistance $R_{DS(on)} = 85m\Omega$ (typ.)
- Input Capacitance $C_{iss} = 1030pF$ (typ.)
- 4V drive
- Halogen free compliance
- Protection diode in

Specifications

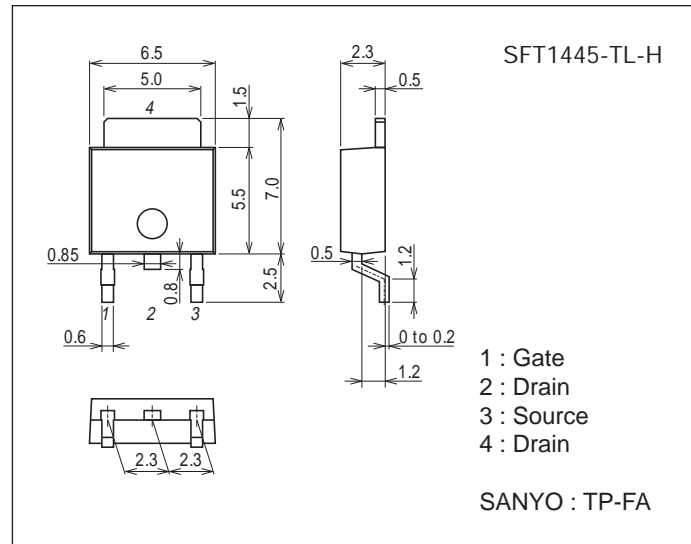
Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		100	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		17	A
Drain Current ($PW \leq 10\mu s$)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	68	A
Allowable Power Dissipation	P_D		1.0	W
		$T_c = 25^\circ C$	35	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions unit : mm (typ)
7518-004



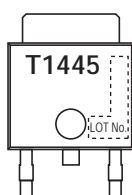
Package Dimensions unit : mm (typ)
7003-004



Product & Package Information

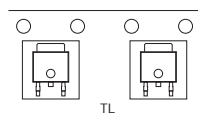
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

Marking
(TP, TP-FA)

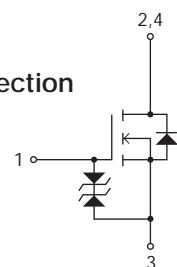


- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

Packing Type (TP-FA) : TL



Electrical Connection

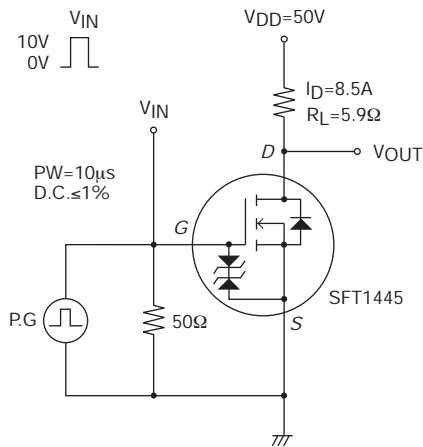


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Electrical Characteristics at Ta=25°C

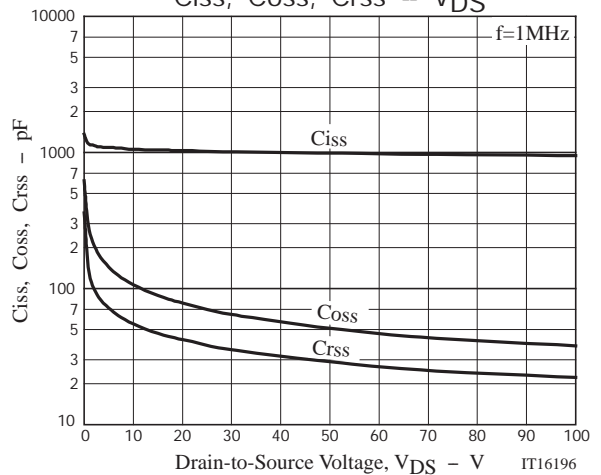
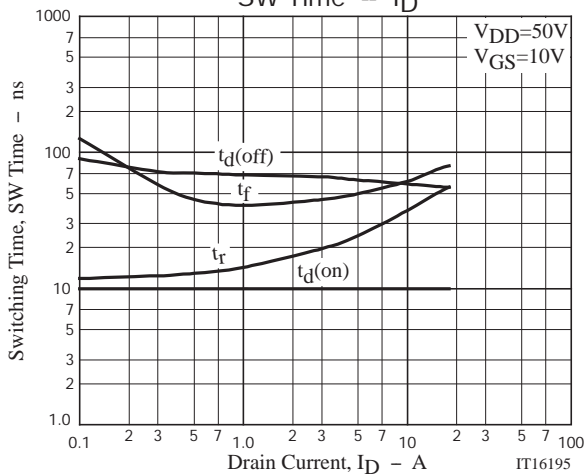
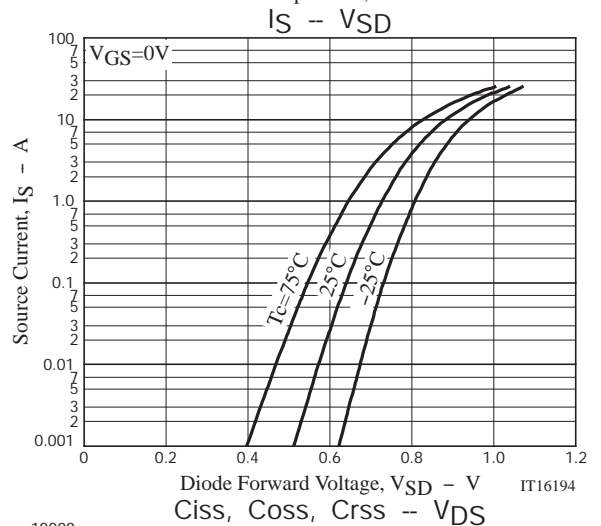
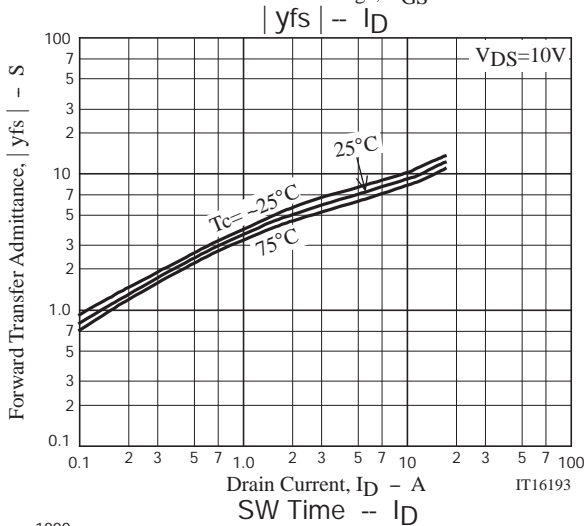
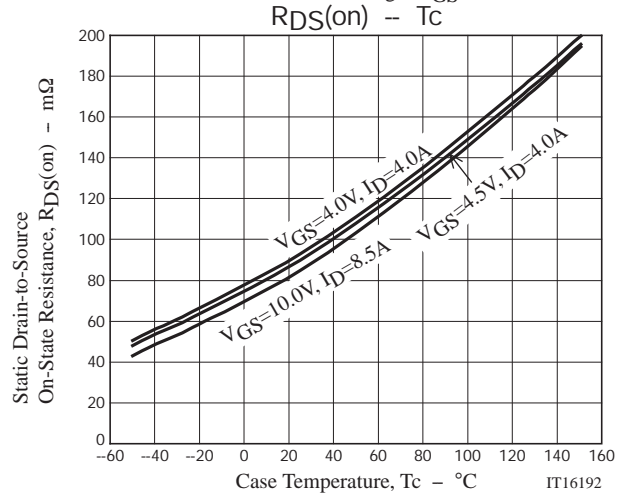
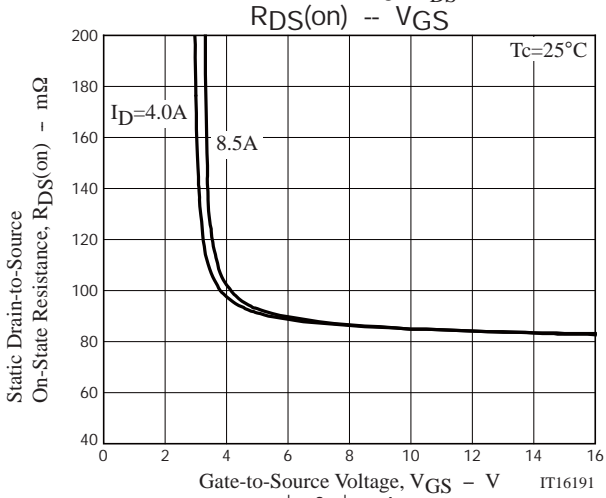
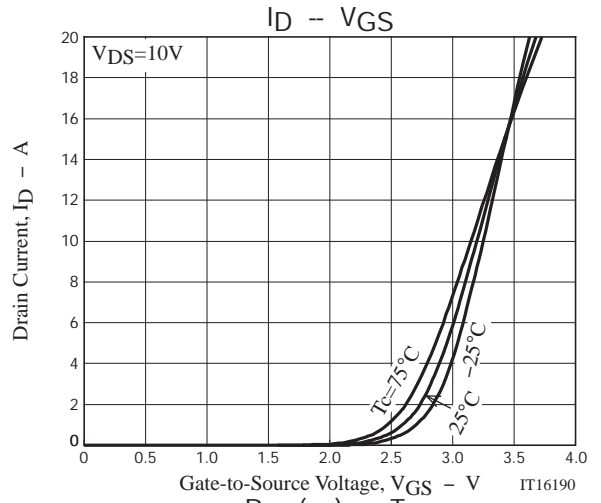
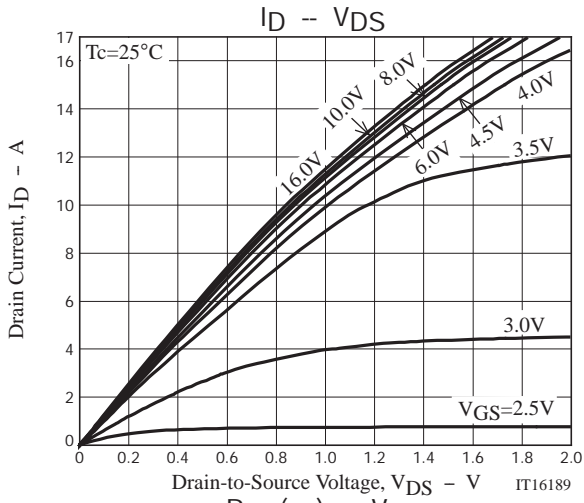
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	100			V
Zero-Gate Voltage Drain Current	IDSS	VDS=100V, VGS=0V			1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	VDS=10V, ID=8.5A		8.9		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=8.5A, VGS=10V		85	111	mΩ
	RDS(on)2	ID=4A, VGS=4.5V		90	126	mΩ
	RDS(on)3	ID=4A, VGS=4V		93	130	mΩ
Input Capacitance	Ciss	VDS=20V, f=1MHz		1030		pF
Output Capacitance	Coss			78		pF
Reverse Transfer Capacitance	Crss			42		pF
Turn-ON Delay Time	td(on)		See specified Test Circuit.		10	
Rise Time	tr			35		ns
Turn-OFF Delay Time	td(off)			60		ns
Fall Time	tf			60		ns
Total Gate Charge	Qg	VDS=50V, VGS=10V, ID=17A			19	
Gate-to-Source Charge	Qgs			3.6		nC
Gate-to-Drain "Miller" Charge	Qgd			3.8		nC
Diode Forward Voltage	VSD		IS=17A, VGS=0V		0.96	1.2

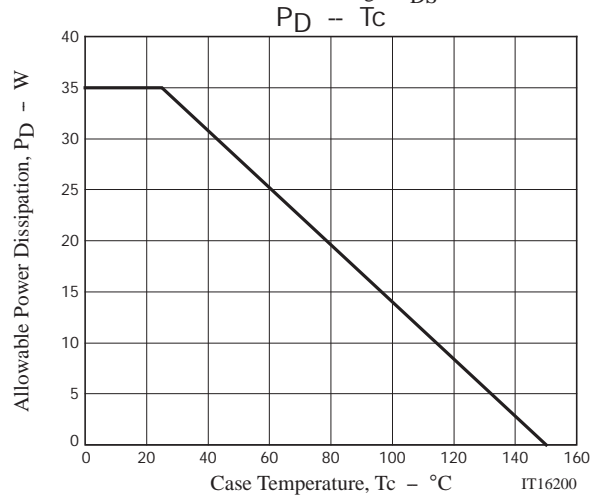
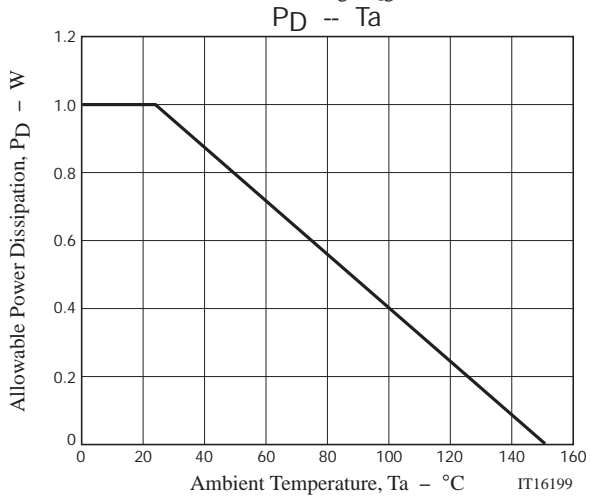
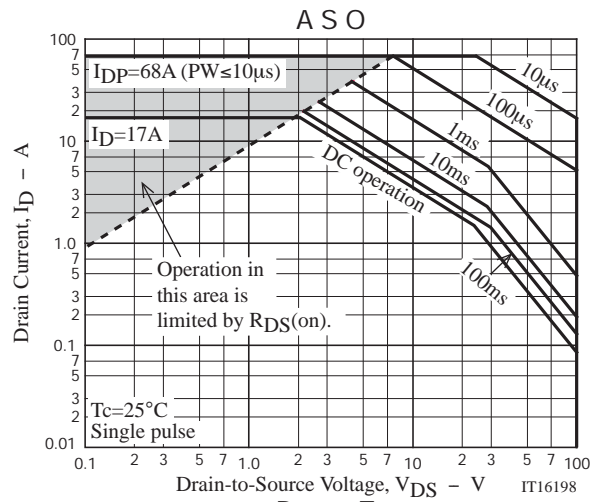
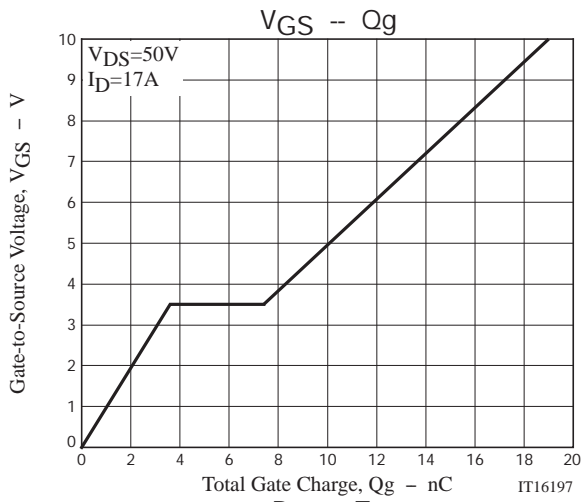
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
SFT1445-H	TP	500pcs./bag	Pb Free and Halogen Free
SFT1445-TL-H	TP-FA	700pcs./reel	





Taping Specification

SFT1445-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.

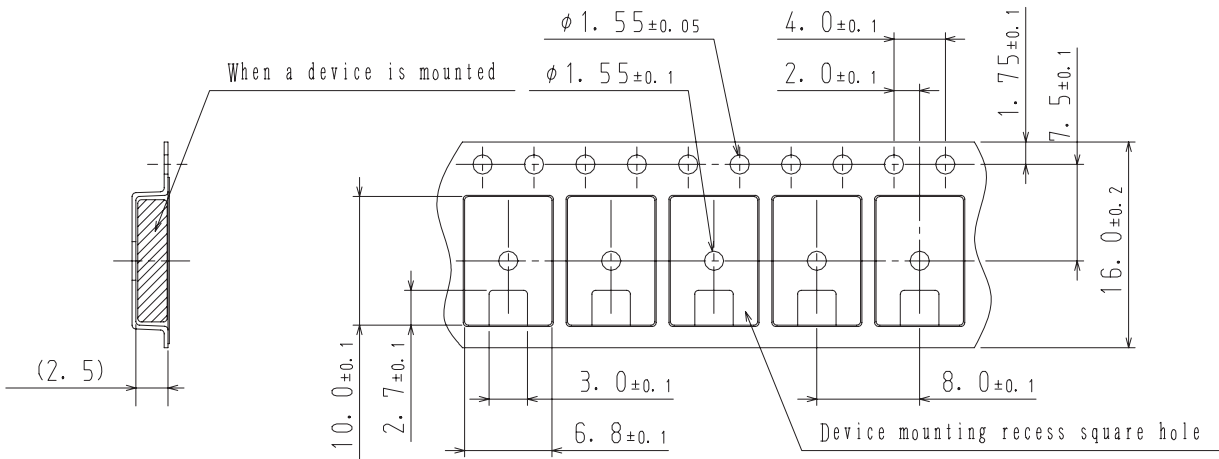
Type No. →
LOT No. →
Quantity →
Origin →

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

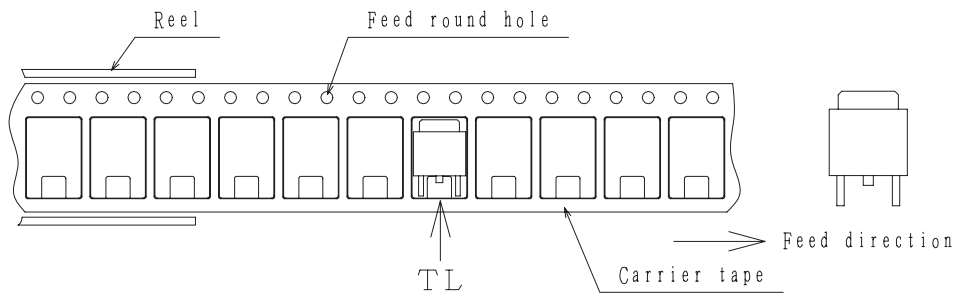
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

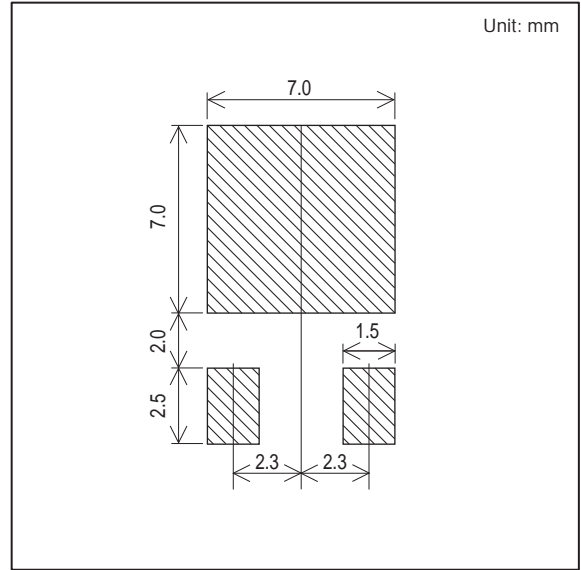
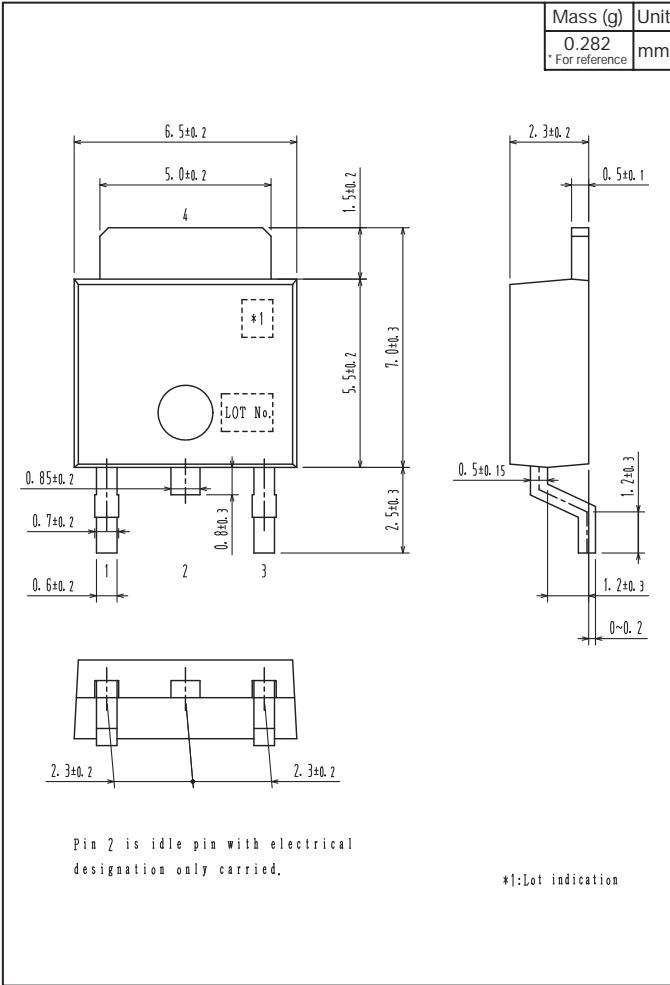


Those with one electrode terminal on the feed hole side.....TL

SFT1445

Outline Drawing SFT1445-TL-H

Land Pattern Example



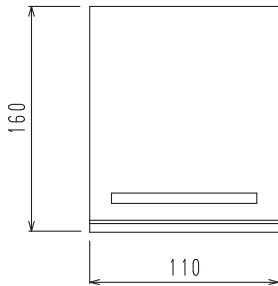
Bag Packing Specification

SFT1445-H

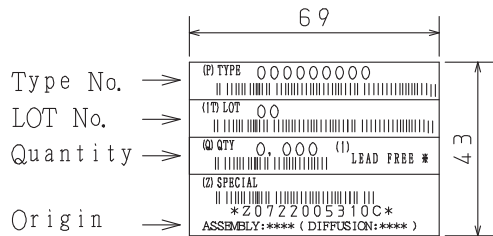
1. Packing Format

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)



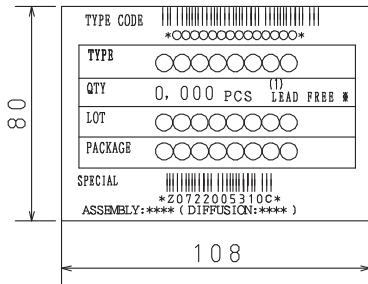
4. Outer box label
(unit:mm)

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.

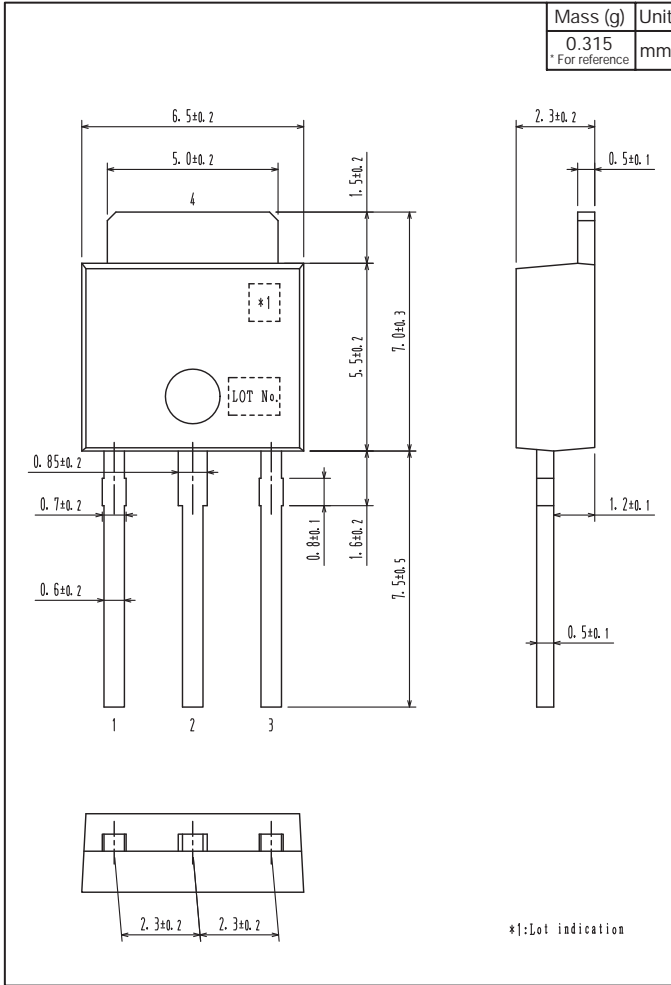
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



SFT1445

Outline Drawing

SFT1445-H



Note on usage : Since the SFT1445 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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