



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SFT1423 — N-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

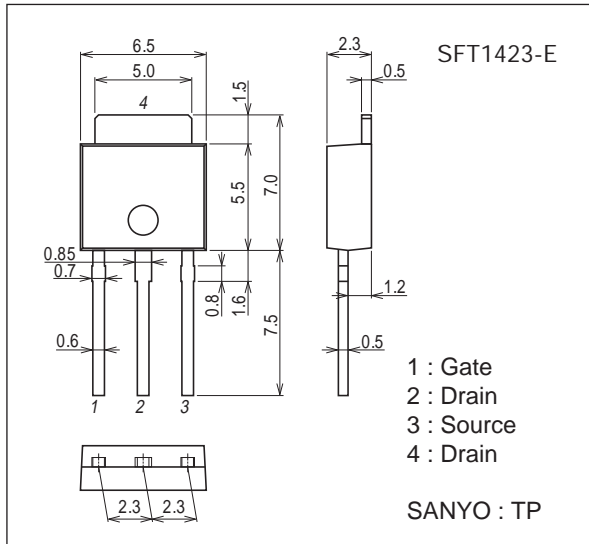
- ON-resistance
- 4V drive
- Protection diode in

Specifications

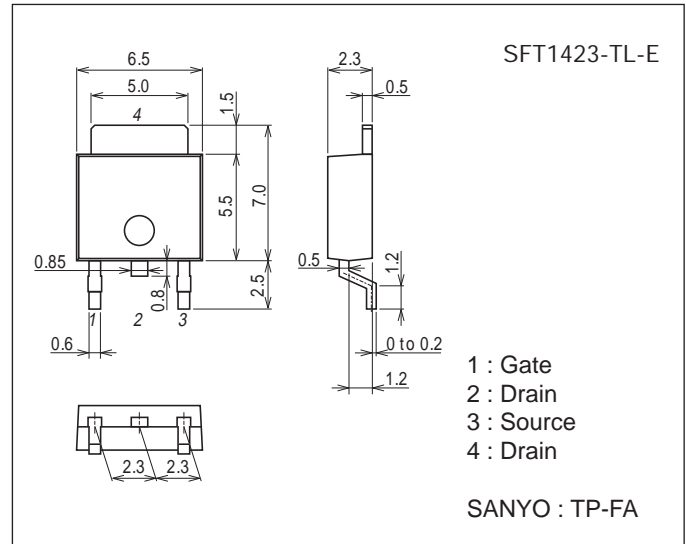
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		500	V
Gate-to-Source Voltage	V _{GSS}		±20	V
Drain Current (DC)	I _D		2	A
Drain Current (PW≤10μs)	I _{DP}	PW≤10μs, duty cycle≤1%	10	A
Allowable Power Dissipation	P _D		1.0	W
		T _c =25°C	20	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Package Dimensions unit : mm (typ)
7518-004



Package Dimensions unit : mm (typ)
7003-004

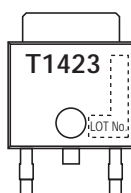


Product & Package Information

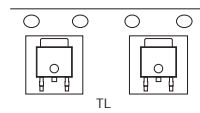
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

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

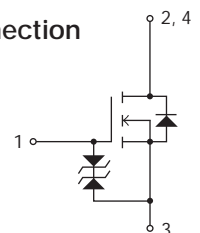
Marking
(TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection

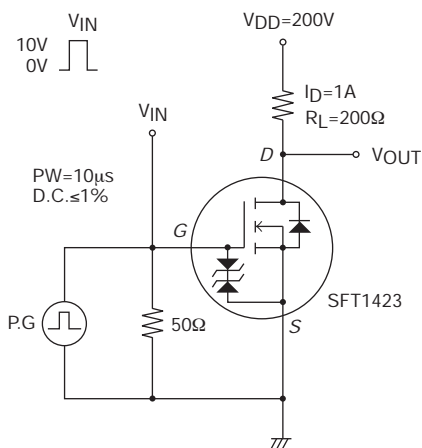


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Electrical Characteristics at Ta=25°C

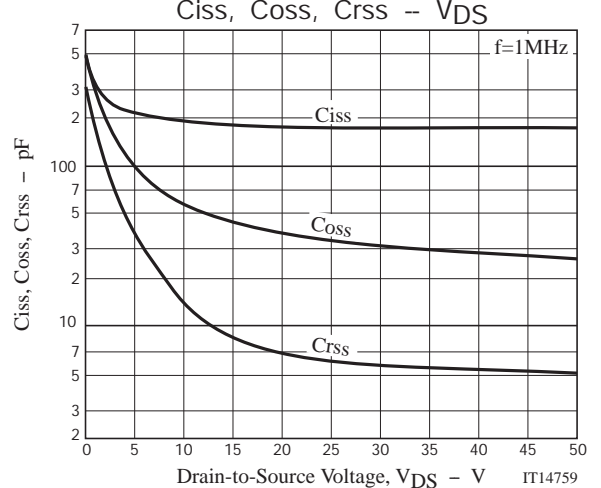
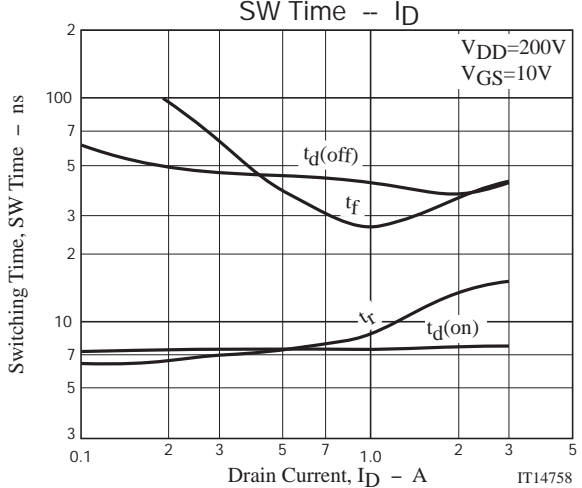
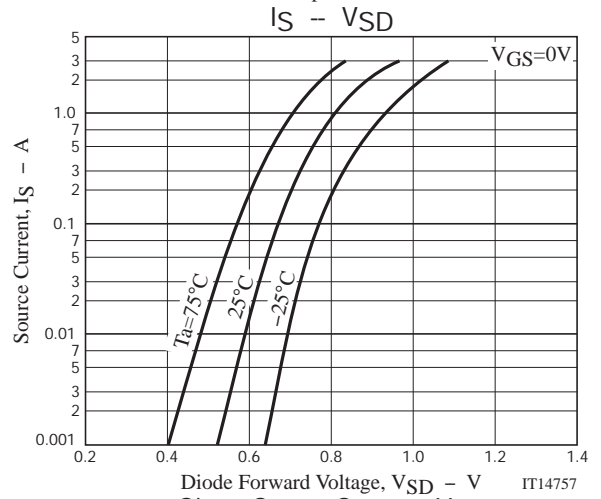
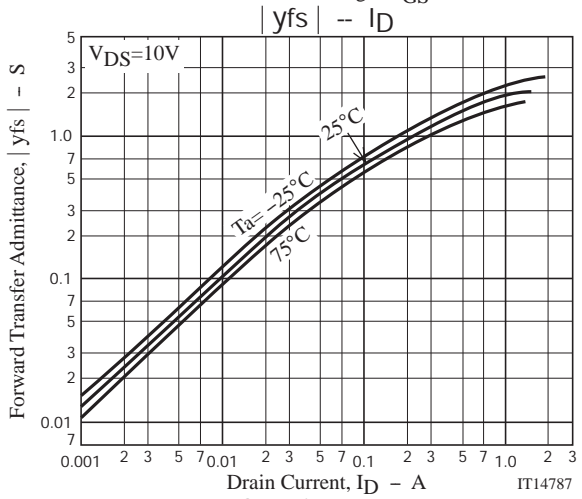
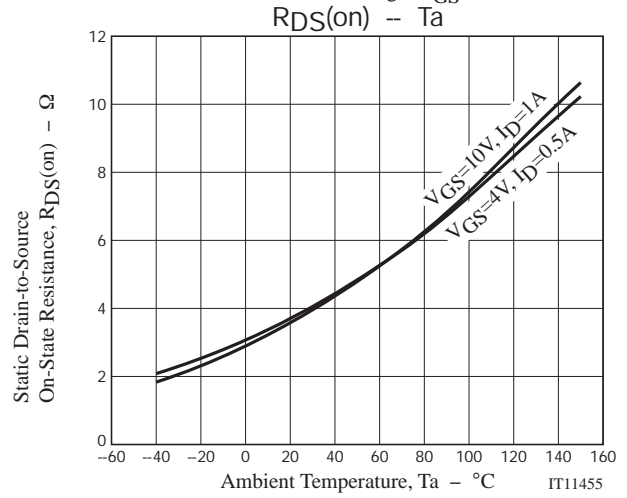
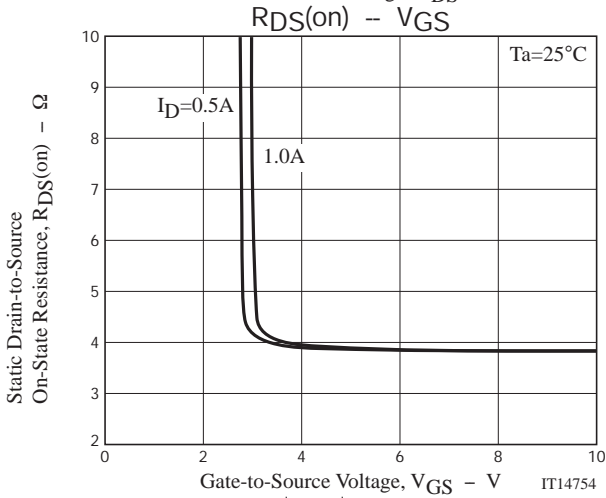
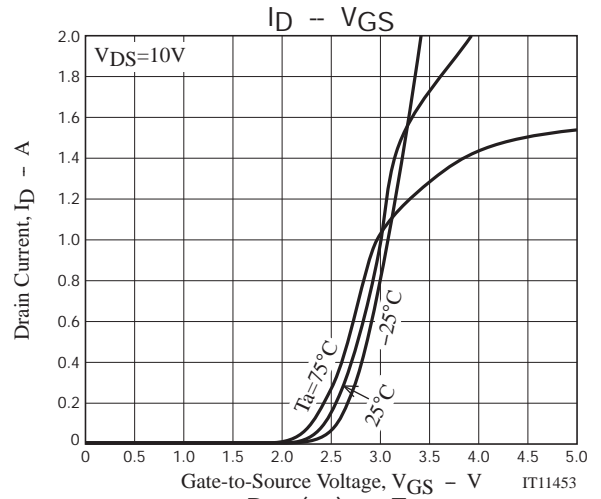
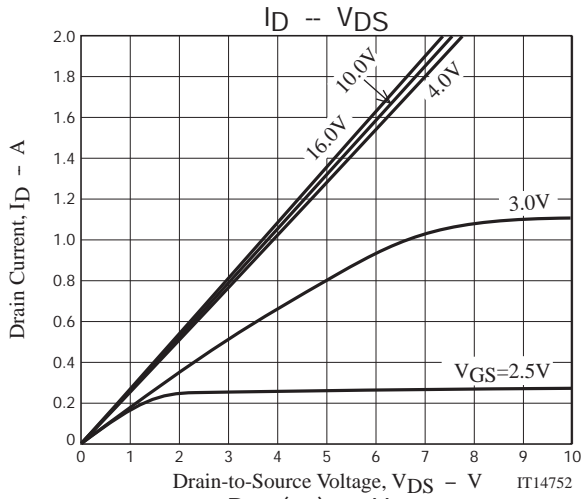
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =10mA, V _{GS} =0V	500			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =400V, V _{GS} =0V			100	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =1A	1.1	1.9		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =1A, V _{GS} =10V		3.8	4.9	Ω
	R _{DS(on)2}	I _D =0.5A, V _{GS} =4V		3.9	5	Ω
Input Capacitance	C _{iss}	V _{DS} =30V, f=1MHz		175		pF
Output Capacitance	C _{oss}			32		pF
Reverse Transfer Capacitance	C _{rss}			6		pF
Turn-ON Delay Time	t _{d(on)}		See specified Test Circuit.		7.4	
Rise Time	t _r			8.8		ns
Turn-OFF Delay Time	t _{d(off)}			42		ns
Fall Time	t _f			27		ns
Total Gate Charge	Q _g	V _{DS} =200V, V _{GS} =10V, I _D =2A			8.7	
Gate-to-Source Charge	Q _{gs}			1.1		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			2.9		nC
Diode Forward Voltage	V _{SD}		I _S =2A, V _{GS} =0V		0.9	1.2

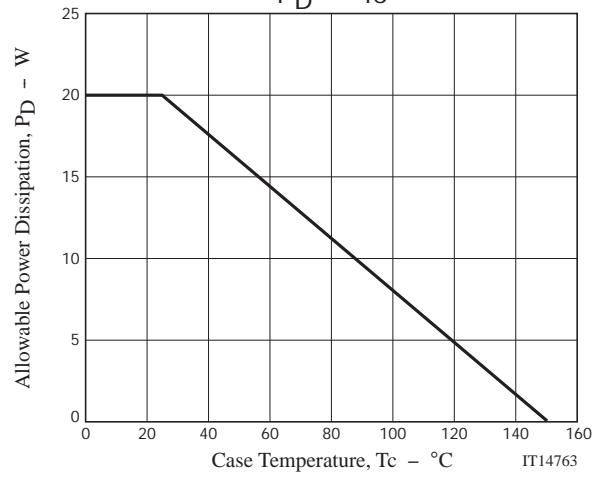
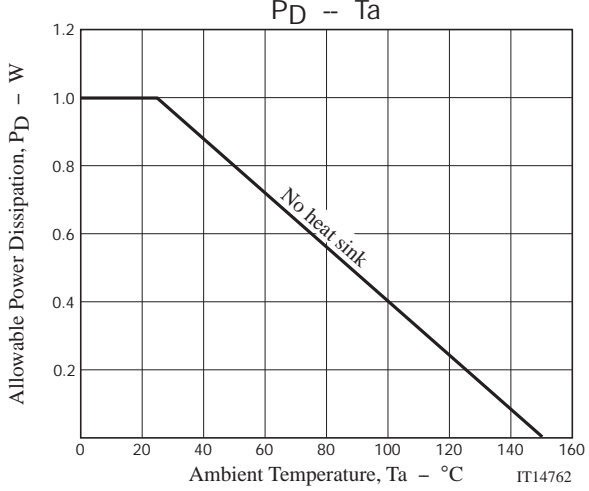
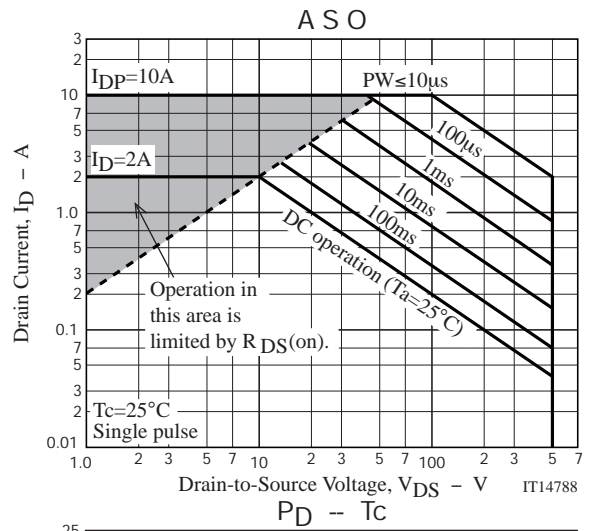
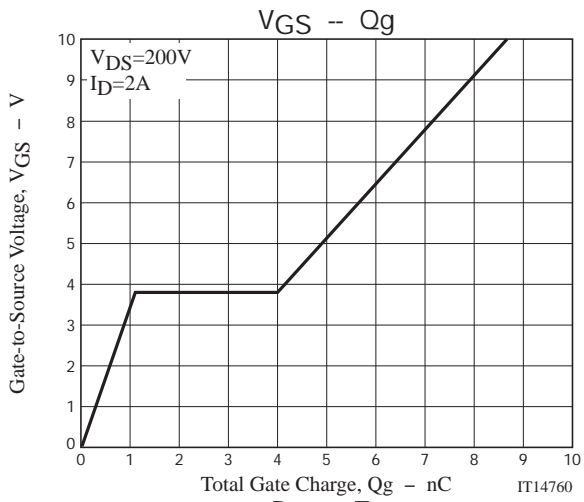
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
SFT1423-E	TP	500pcs./bag	Pb Free
SFT1423-TL-E	TP-FA	700pcs./reel	





Taping Specification

SFT1423-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



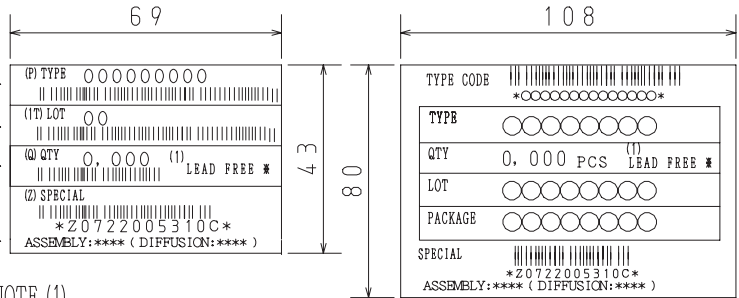
Type No.
LOT No.
Quantity
Origin

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.



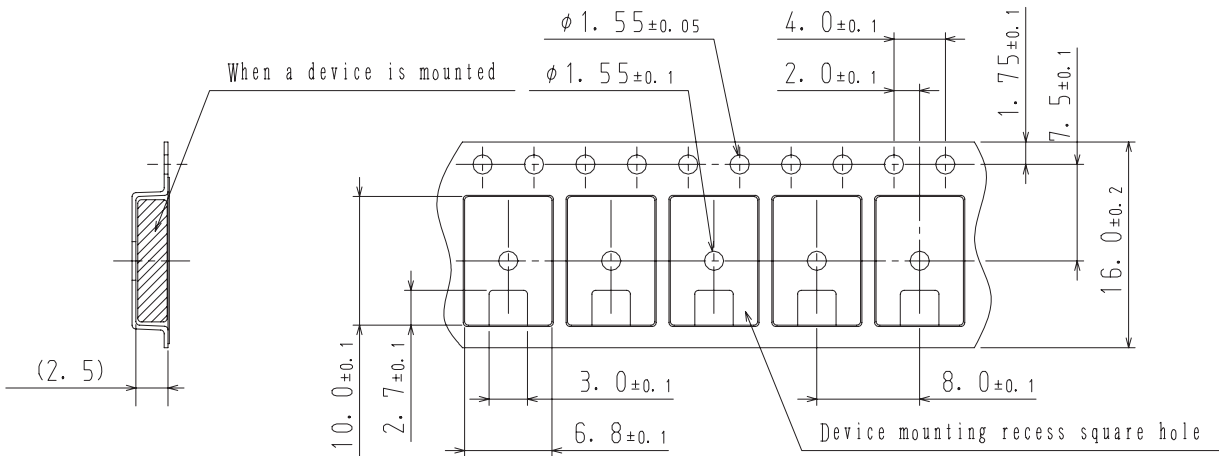
NOTE (1)

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

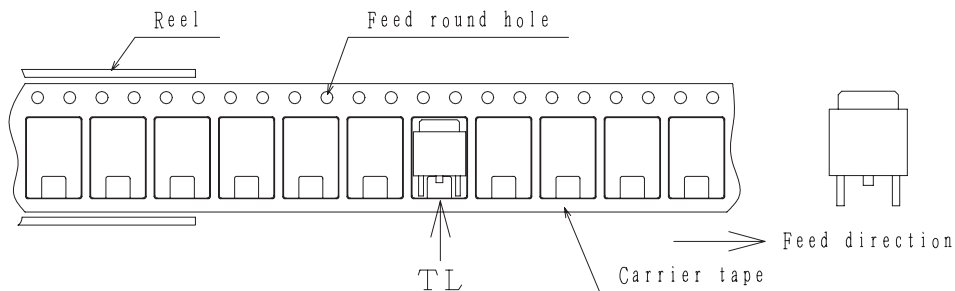
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

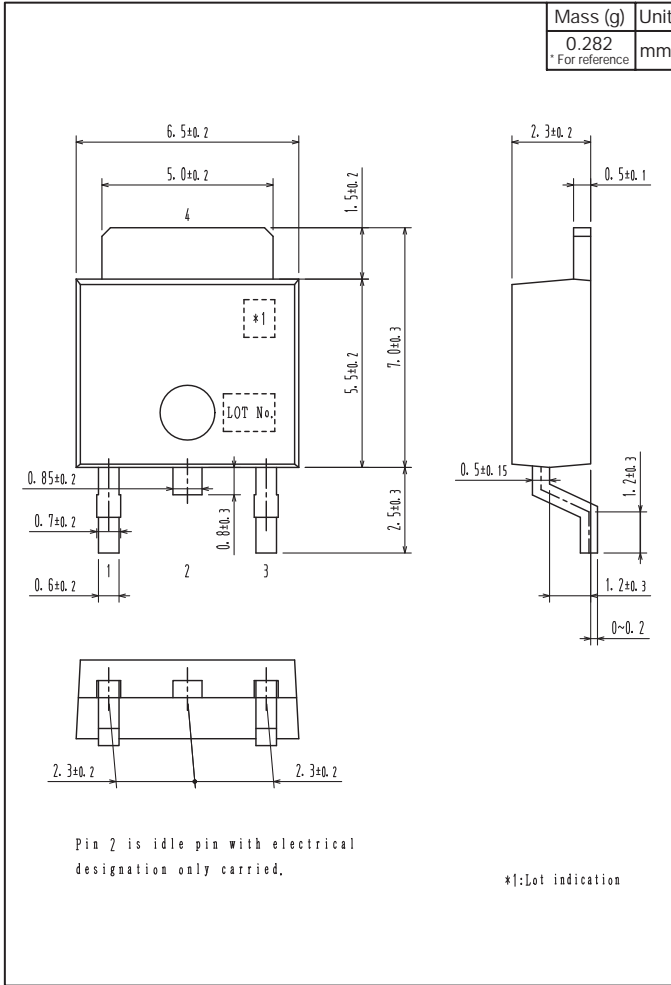


Those with one electrode terminal on the feed hole side.....TL

SFT1423

Outline Drawing

SFT1423-TL-E



Land Pattern Example



SFT1423

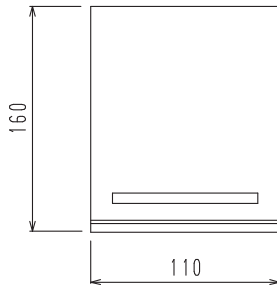
Bag Packing Specification

SFT1423-E

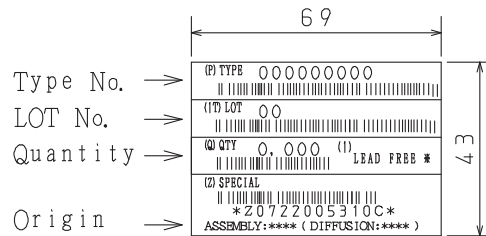
1. Packing Format

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)



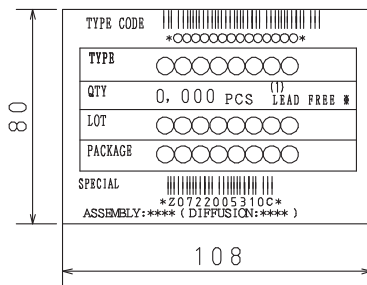
4. Outer box label (unit:mm)

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.

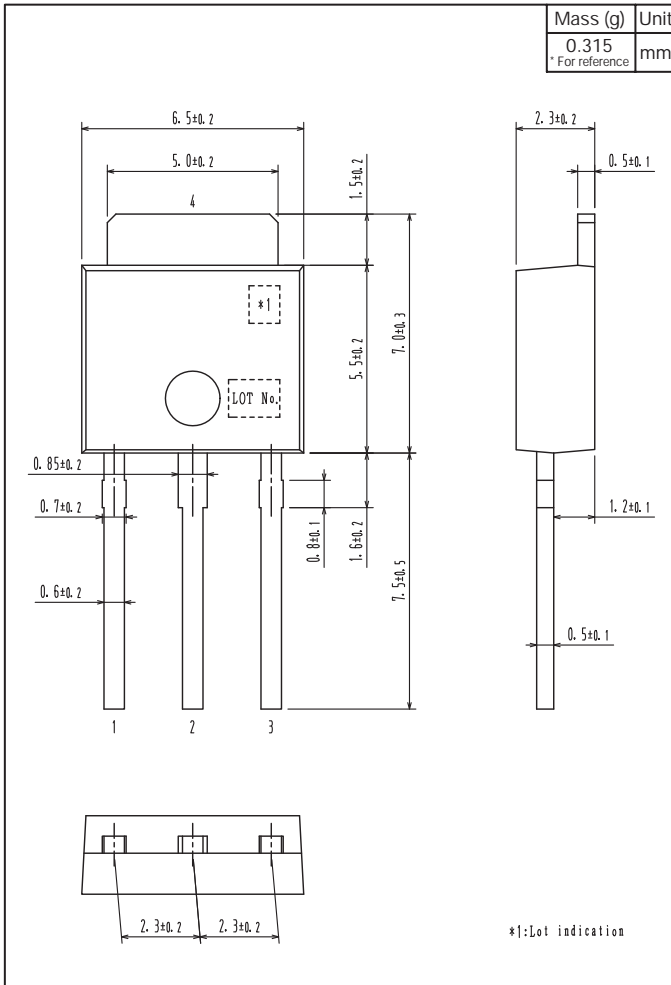
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



SFT1423

Outline Drawing

SFT1423-E



Note on usage : Since the SFT1423 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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