



2SA2126

Bipolar Transistor -50V, -3A, Low VCE(sat), PNP Single TP/TP-FA

ON Semiconductor®

<http://onsemi.com>

Applications

- DC / DC converter, relay drivers, lamp drivers, motor drivers

Features

- Adoption of MBIT processes
- Low collector-to-emitter saturation voltage
- High current capacitance
- High-speed switching

Specifications

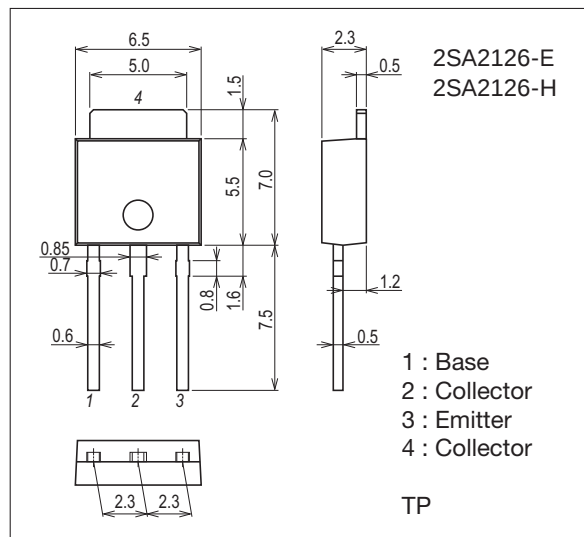
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		-50	V
Collector-to-Emitter Voltage	V _{CES}		-50	V
Collector-to-Emitter Voltage	V _{CEO}		-50	V
Emitter-to-Base Voltage	V _{EB0}		-6	V
Collector Current	I _C		-3	A
Collector Current (Pulse)	I _{CP}		-6	A
Base Current	I _B		-600	mA

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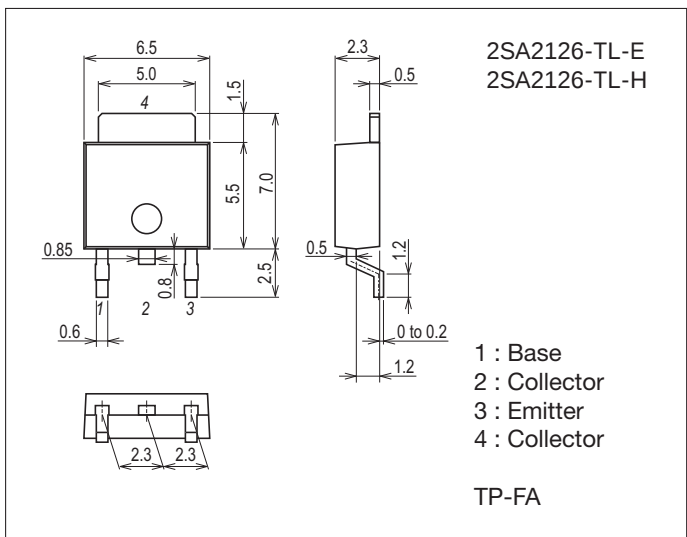
Package Dimensions unit : mm (typ)

7518-003



Package Dimensions unit : mm (typ)

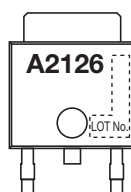
7003-003



Product & Package Information

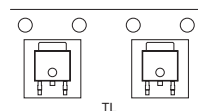
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

Marking (TP, TP-FA)

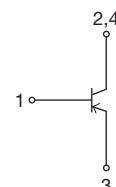


- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

Packing Type (TP-FA) : TL



Electrical Connection



2SA2126

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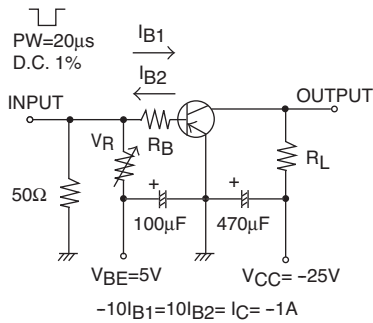
Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	P _C		0.8	W
		T _C =25°C	15	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Electrical Characteristics at T_a=25°C

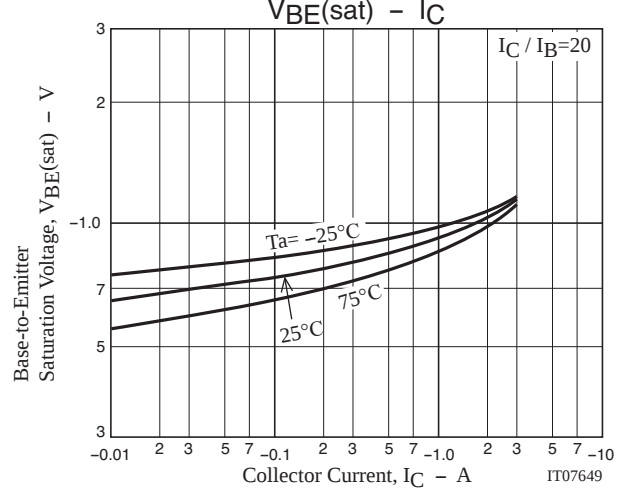
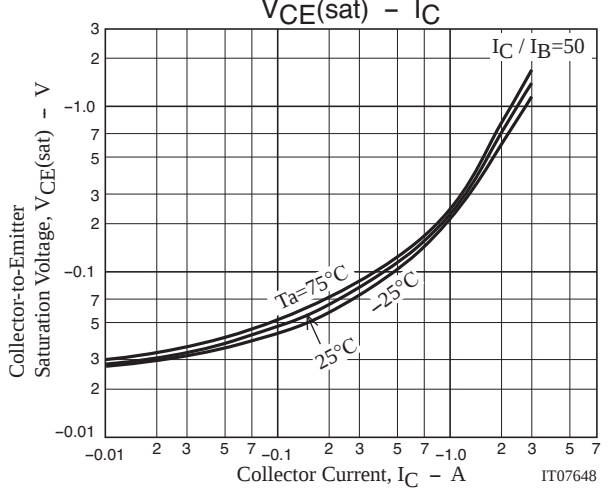
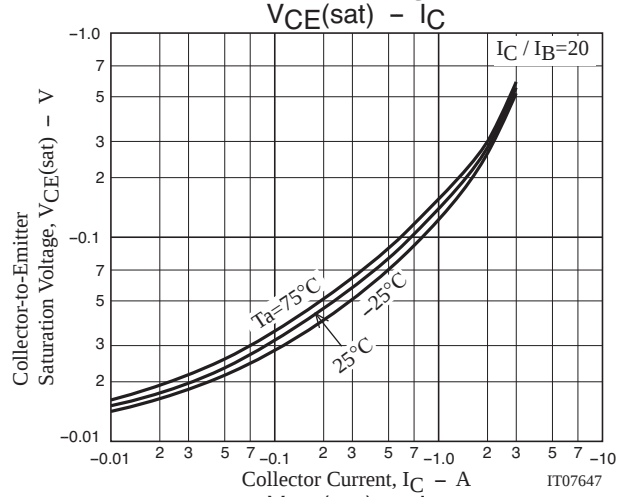
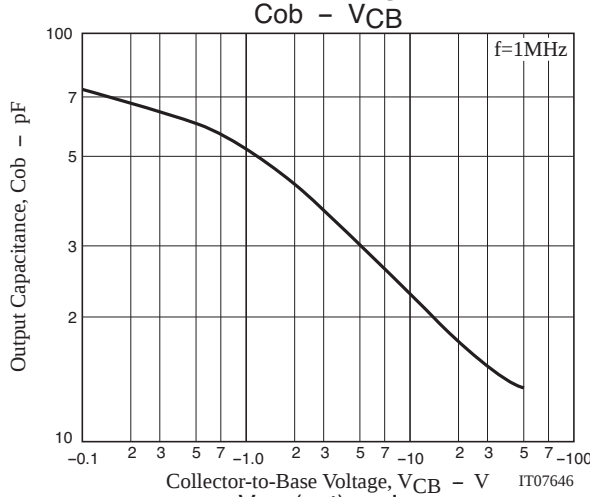
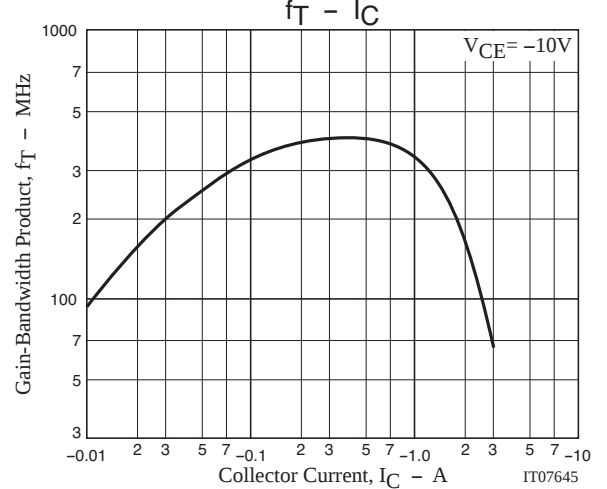
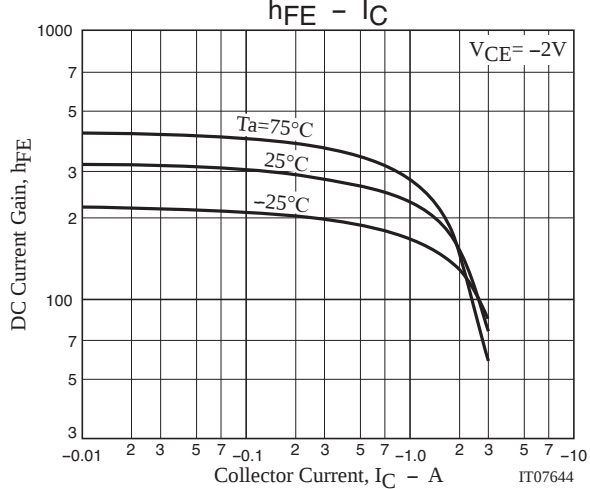
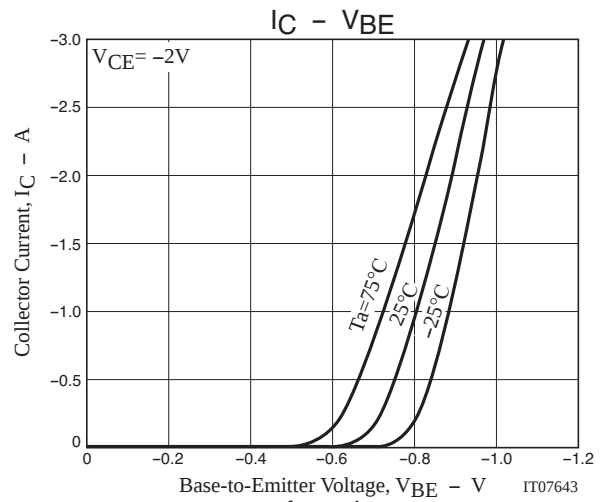
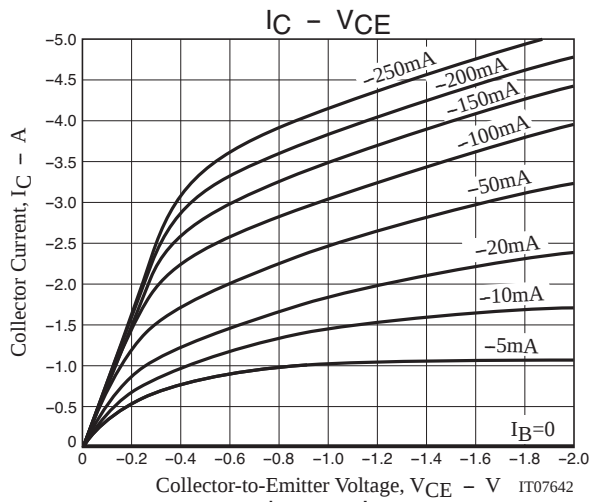
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} = -40V, I _E =0A			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = -4V, I _C =0A			-1	μA
DC Current Gain	h _{FE}	V _{CE} = -2V, I _C = -100mA	200		560	
Gain-Bandwidth Product	f _T	V _{CE} = -10V, I _C = -500mA		390		MHz
Output Capacitance	C _{ob}	V _{CB} = -10V, f=1MHz		24		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)1}	I _C = -1A, I _B = -50mA		-135	-270	mV
	V _{CE(sat)2}	I _C = -2A, I _B = -100mA		-260	-520	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C = -2A, I _B = -100mA		-0.96	-1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C = -10μA, I _E =0A	-50			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CES}	I _C = -100μA, R _{BE} =0	-50			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} =∞	-50			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E = -10μA, I _C =0A	-6			V
Turn-On Time	t _{on}	See specified Test Circuit.		30		ns
Storage Time	t _{stg}			230		ns
Fall Time	t _f			18		ns

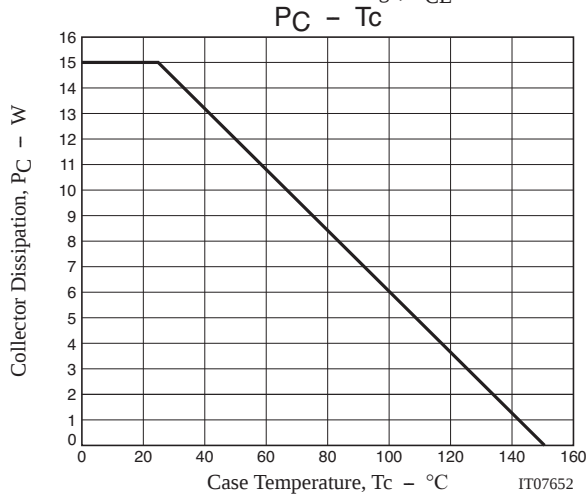
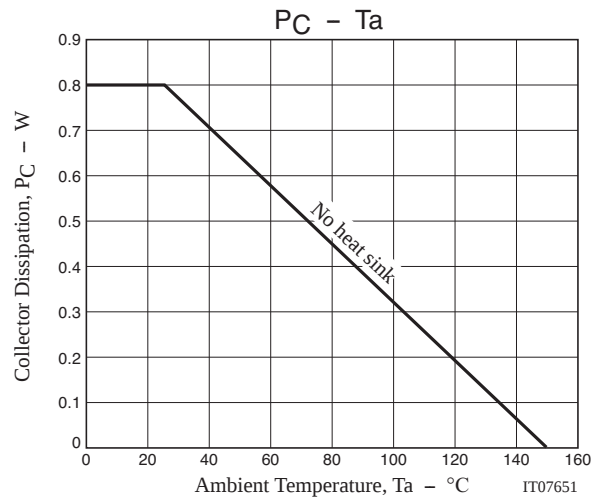
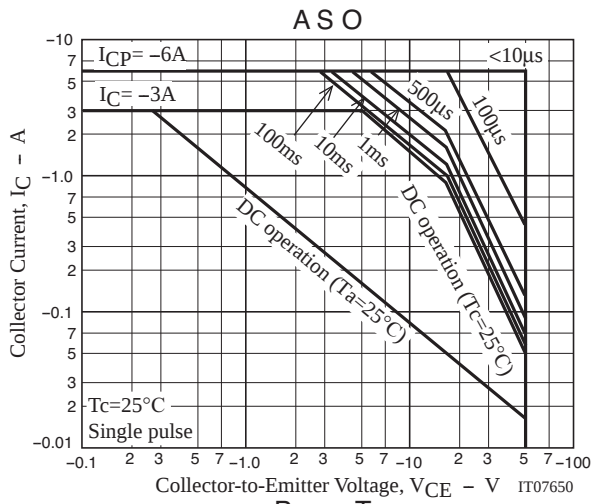
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
2SA2126-E	TP	500pcs./bag	Pb Free
2SA2126-H	TP	500pcs./bag	Pb Free and Halogen Free
2SA2126-TL-E	TP-FA	700pcs./reel	Pb Free
2SA2126-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free





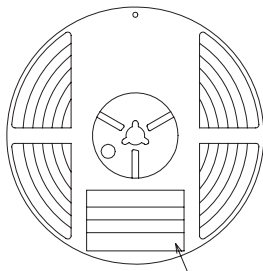
Taping Specification

2SA2126-TL-E, 2SA2126-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



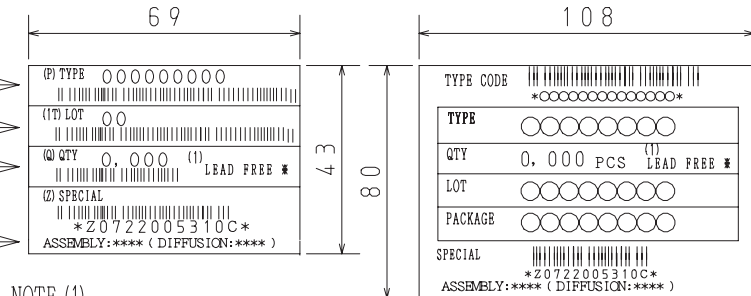
Reel label

Type No.
LOT No.
Quantity
Origin

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.



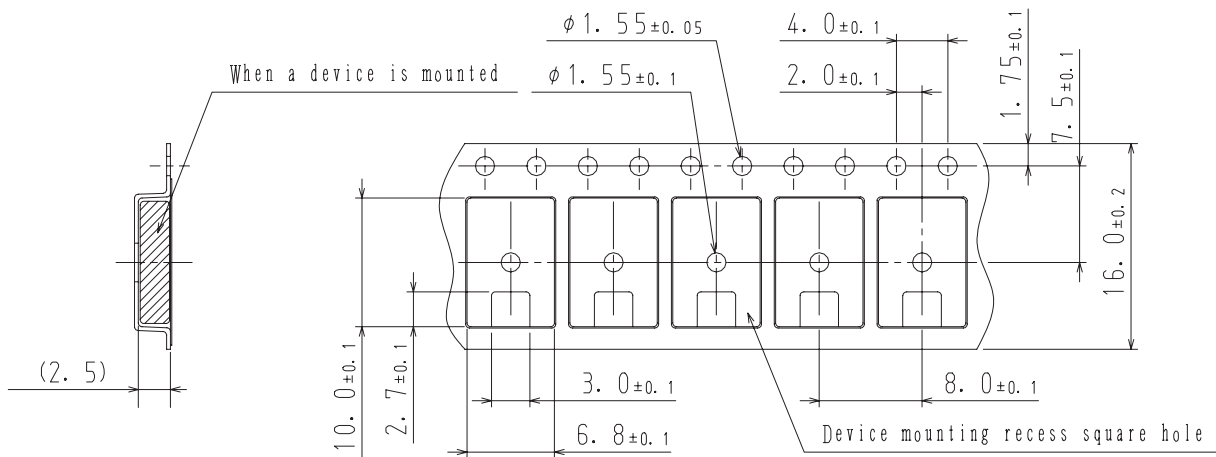
NOTE (1)

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

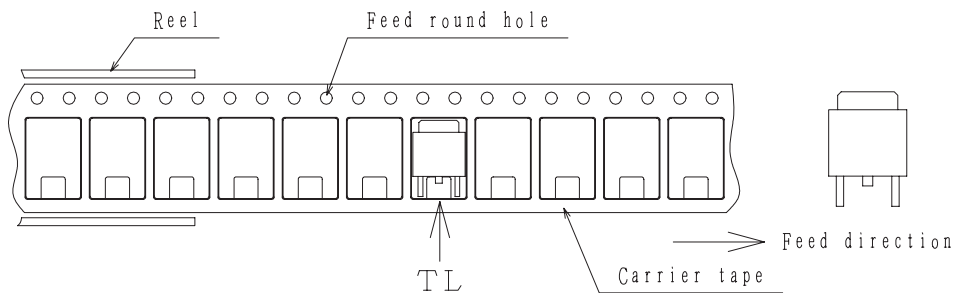
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



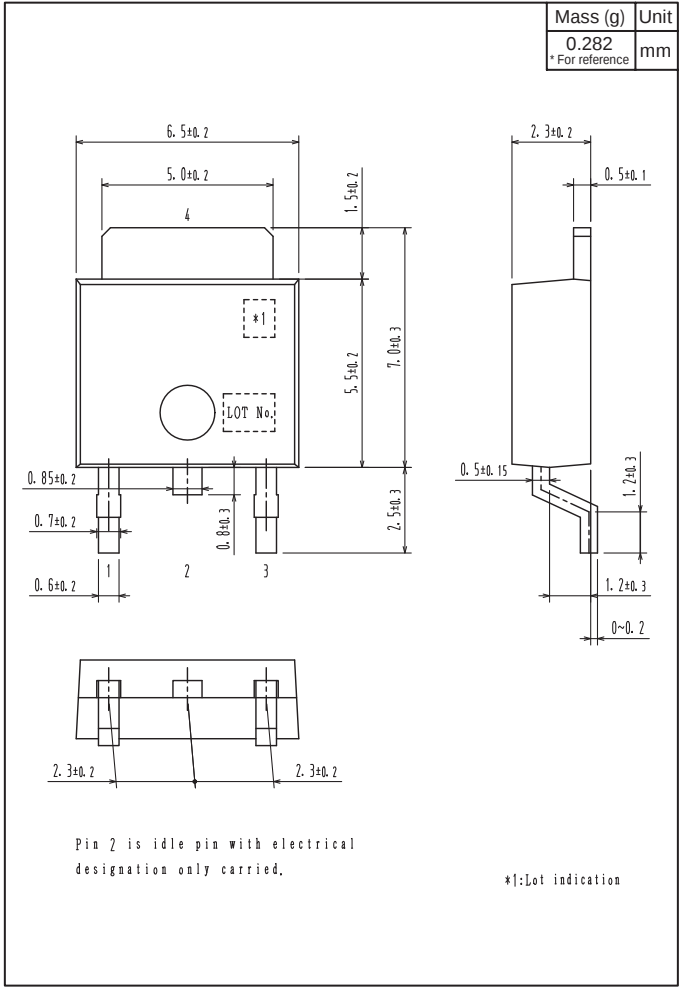
2. Device placement direction



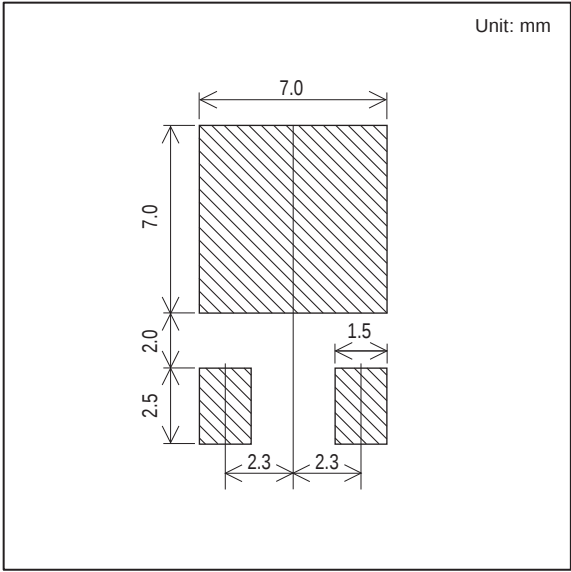
Those with one electrode terminal on the feed hole side.....TL

Outline Drawing

2SA2126-TL-E, 2SA2126-TL-H



Land Pattern Example

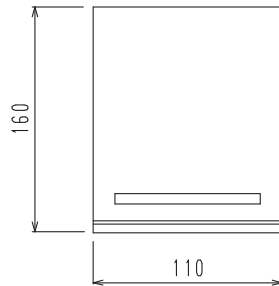


Bag Packing Specification

2SA2126-E, 2SA2126-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)

Type No. →	(P) TYPE 0000000000	43
LOT No. →	(1) LOT 00	
Quantity →	(Q) QTY 0,000 (1) LEAD FREE *	
Origin →	(2) SPECIAL *20722005310C* ASSEMBLY:**** (DIFFUSION:****)	

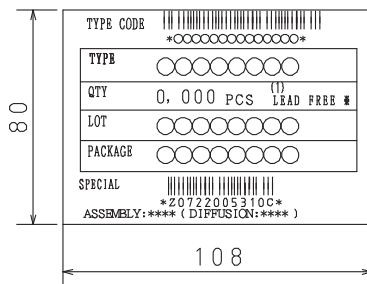
4. Outer box label
(unit:mm)

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

NOTE (1)

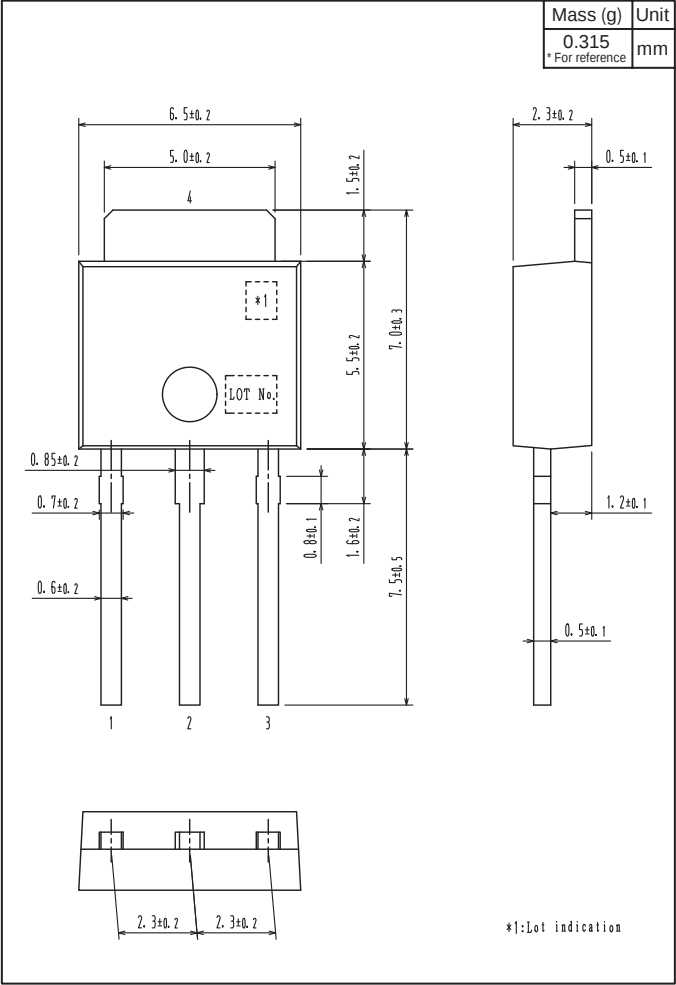
The LEAD FREE * description shows that the
surface treatment of the terminal is lead free.

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



Outline Drawing

2SA2126-E, 2SA2126-H



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