



2SA2153 — PNP Epitaxial Planar Silicon Transistor

High-Current Switching Applications

Applications

- Voltage regulators, relay drivers, lamp drivers, electrical equipment

Features

- Adoption of MBIT process
- Low saturation voltage
- Large current capacity and wide ASO

Specifications

Absolute Maximum Ratings at Ta=25°C

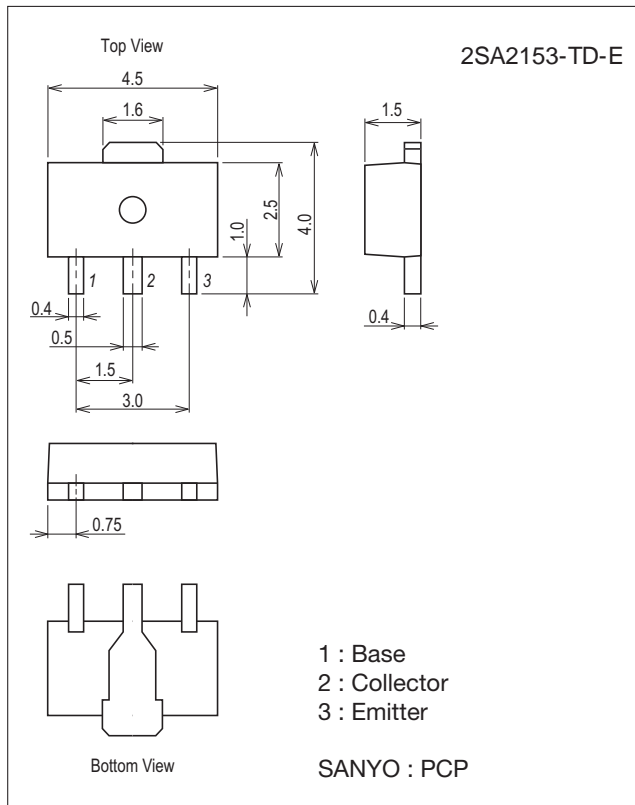
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		-50	V
Collector-to-Emitter Voltage	V _{CEO}		-50	V
Emitter-to-Base Voltage	V _{EB0}		-6	V
Collector Current	I _C		-2	A
Collector Current (Pulse)	I _{CP}		-4	A
Base Current	I _B		-400	mA

Continued on next page.

Package Dimensions

unit : mm (typ)

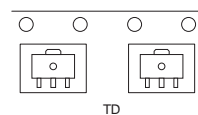
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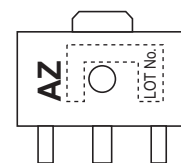
Product & Package Information

- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1,000 pcs./reel

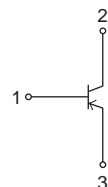
Packing Type: TD



Marking



Electrical Connection



2SA2153

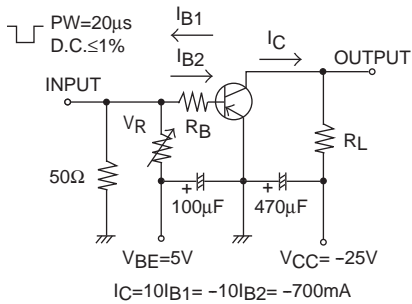
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Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	PC	When mounted on ceramic substrate (450mm ² ×0.8mm)	1.3	W
		T _c =25°C	3.5	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

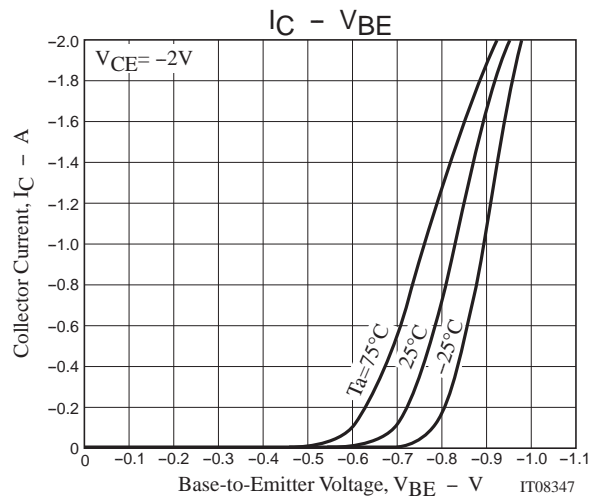
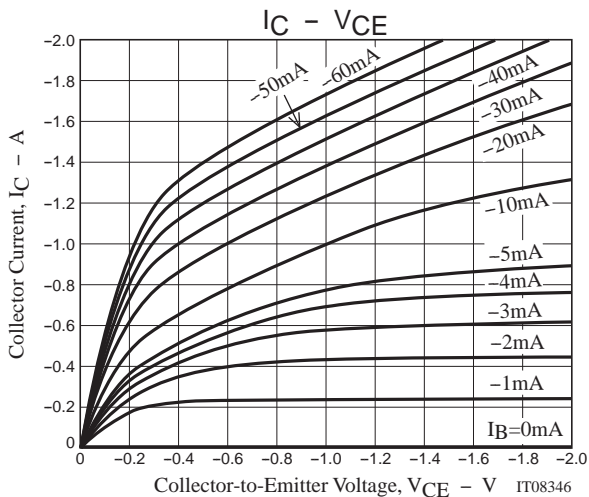
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =-40V, I _E =0A			-1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0A			-1	μA
DC Current Gain	h _{FE1}	V _{CE} =-2V, I _C =-100mA	200		560	
	h _{FE2}	V _{CE} =-2V, I _C =-1.5A	40			
Gain-Bandwidth Product	f _T	V _{CE} =-10V, I _C =-300mA		420		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		16		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-1A, I _B =-50mA	-0.2		-0.4	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-1A, I _B =-50mA	-0.9		-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)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.		35		ns
Storage Time	t _{stg}			200		ns
Fall Time	t _f			24		ns

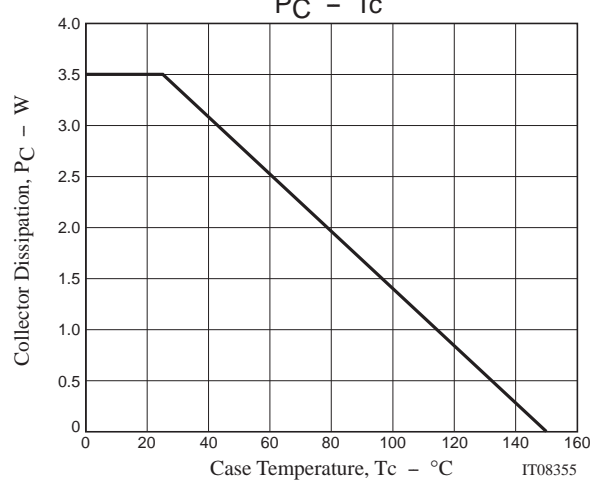
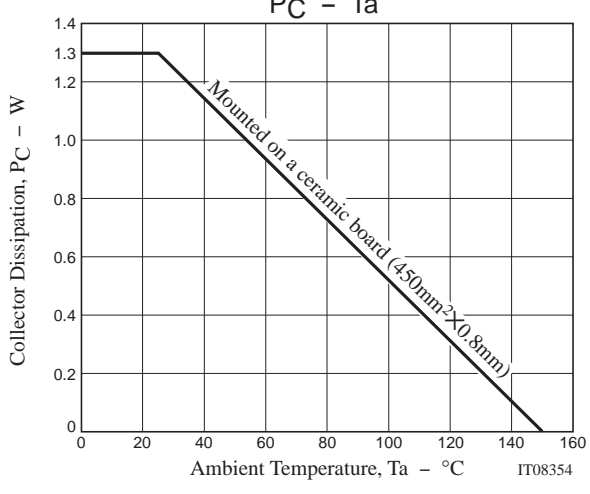
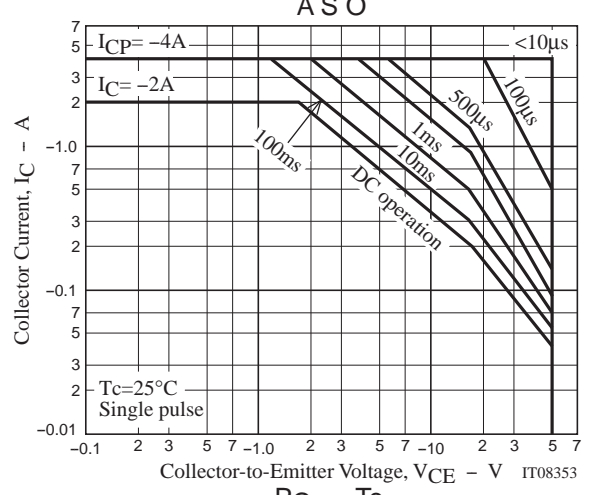
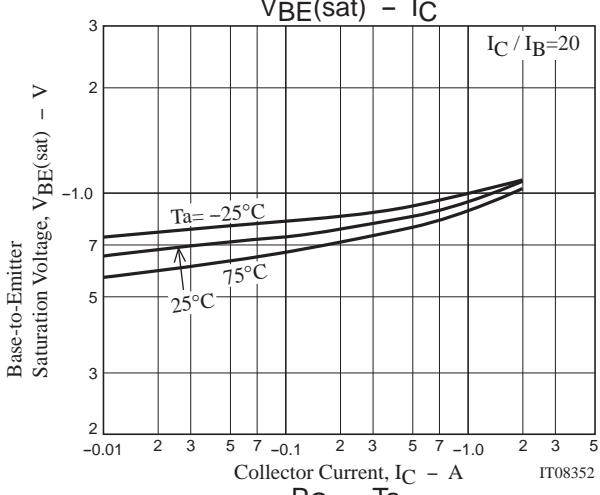
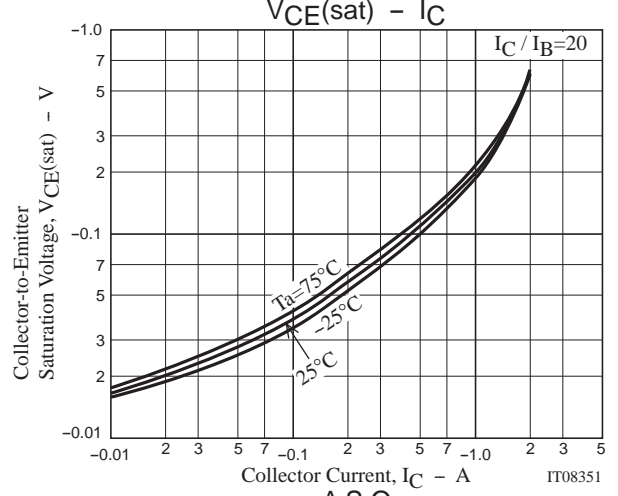
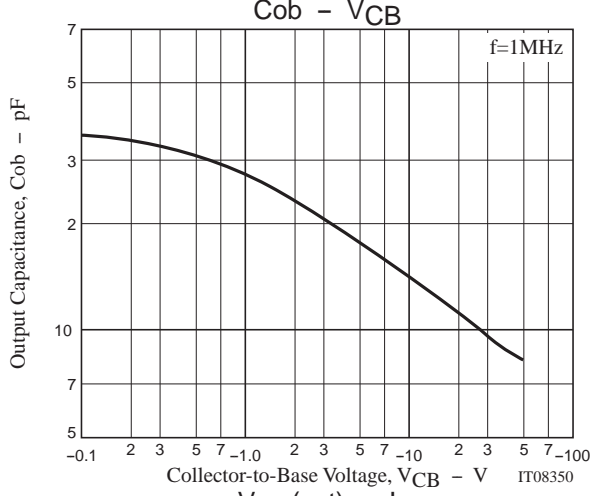
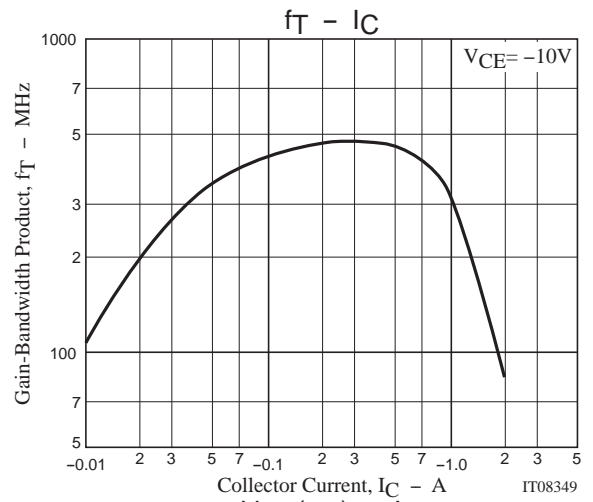
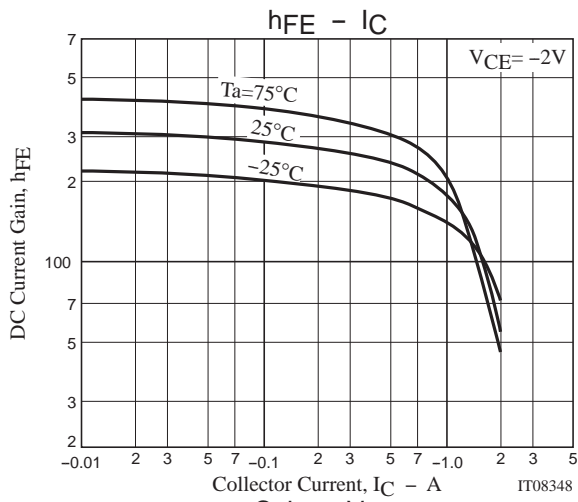
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
2SA2153-TD-E	PCP	1,000pcs./reel	Pb Free





Embossed Taping Specification

2SA2153-TD-E

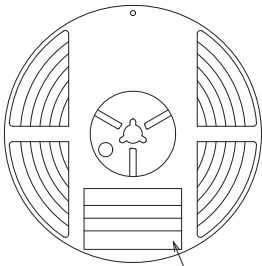
1. Packing Format

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)
PCP	PCP	1,000	4,000	24,000	4 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label
(unit : mm)

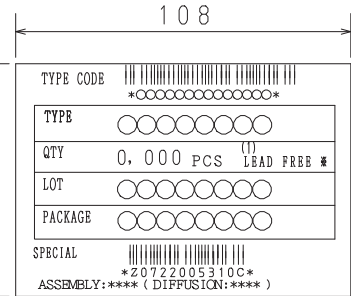
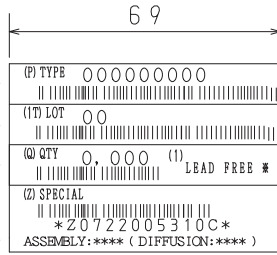
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.
LOT No.
Quantity
Origin



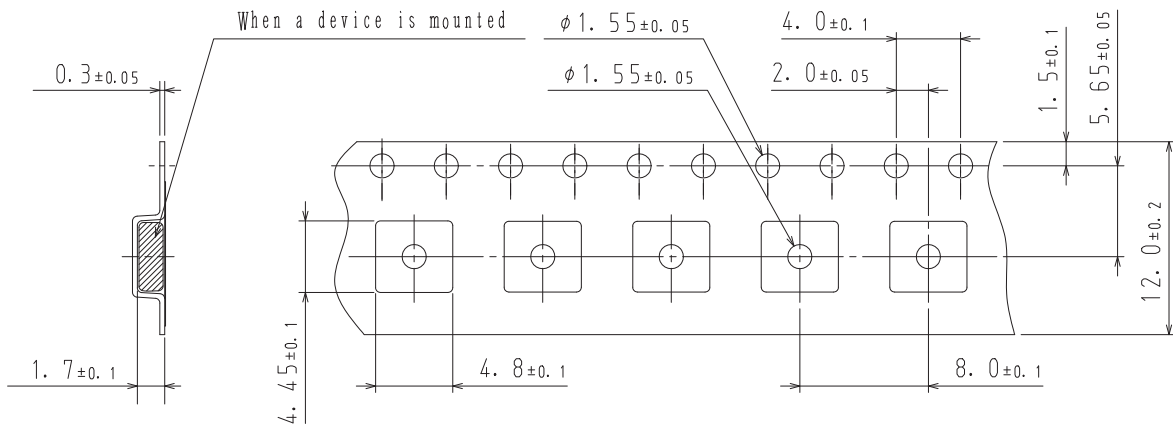
NOTE (1)

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

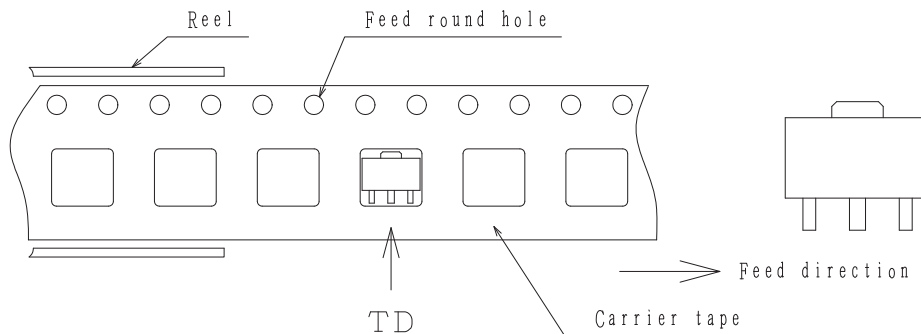
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction

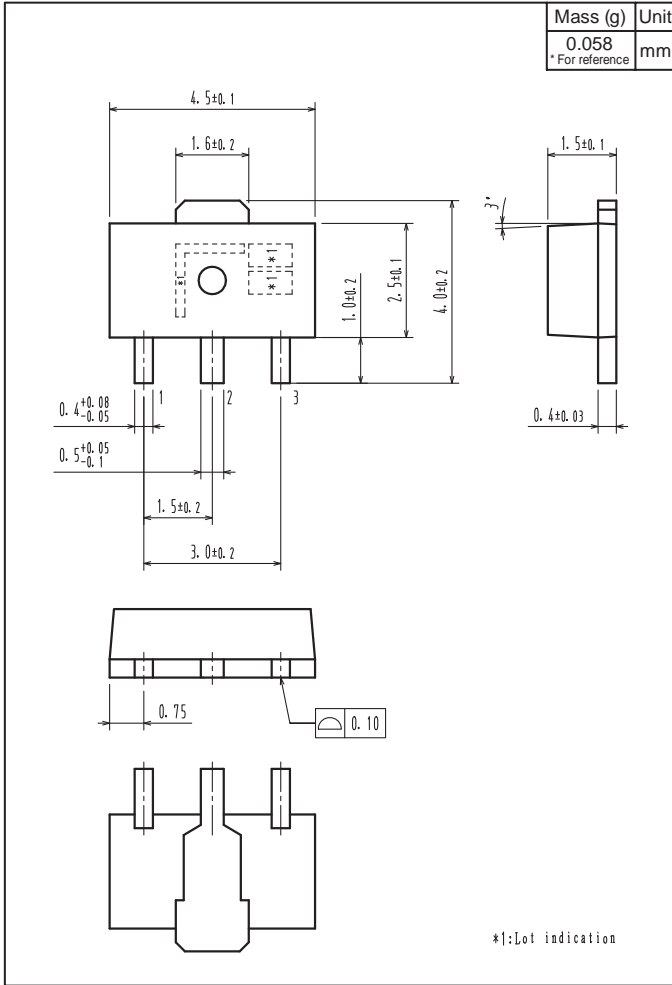


Those with pin 1 index on the feed hole side.....TD

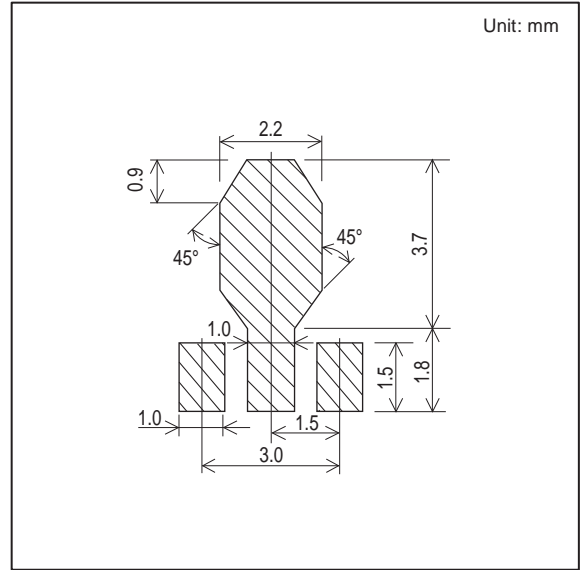
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Outline Drawing

2SA2153-TD-E



Land Pattern Example



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