

Continued from preceding page.

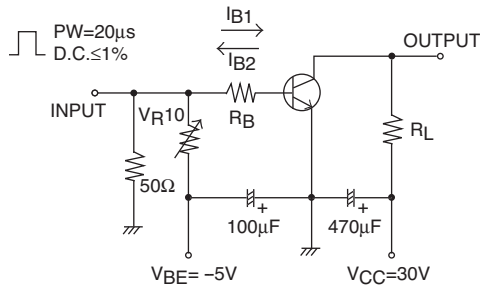
Parameter	Symbol	Conditions	Ratings	Unit
Base Current	$I_B$		600	mA
Collector Dissipation	$P_C$	When mounted on ceramic substrate (250mm <sup>2</sup> ×0.8mm)	1.3	W
		$T_C=25^{\circ}\text{C}$	3.5	W
Junction Temperature	$T_J$		150	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^{\circ}\text{C}$

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 $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=50\text{V}, I_E=0\text{A}$			1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0\text{A}$			1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=2\text{V}, I_C=100\text{mA}$	300		600	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}$		390		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, f=1\text{MHz}$		18		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=1\text{A}, I_B=50\text{mA}$		90	135	mV
	$V_{CE(sat)2}$	$I_C=1\text{A}, I_B=100\text{mA}$		80	120	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=100\text{mA}$		0.84	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0\text{A}$	100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=100\mu\text{A}, R_{BE}=0\Omega$	100			V
	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0\text{A}$	6.5			V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		35		ns
Storage Time	$t_{stg}$			680		ns
Fall Time	$t_f$			24		ns

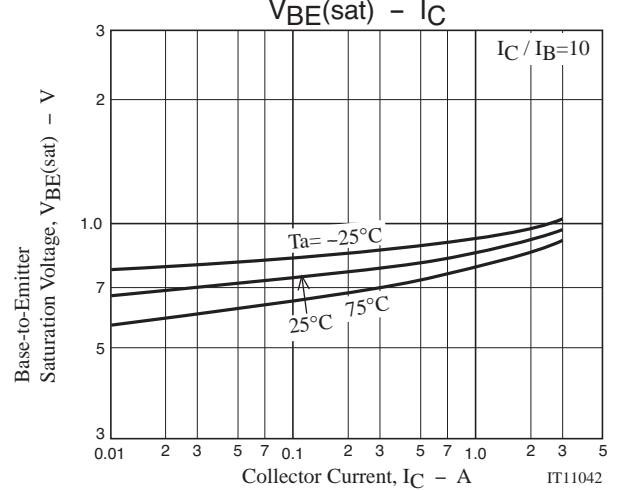
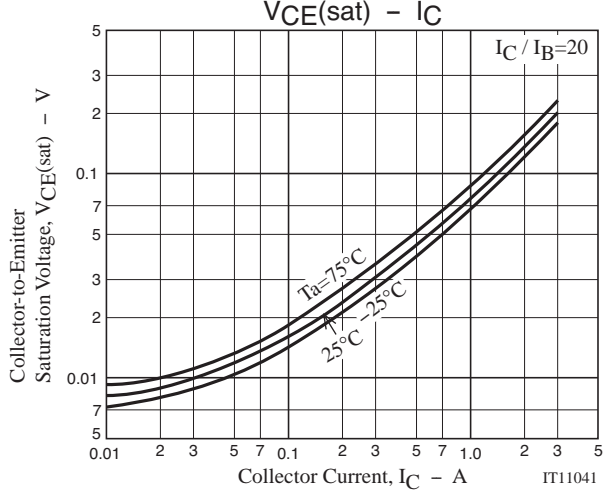
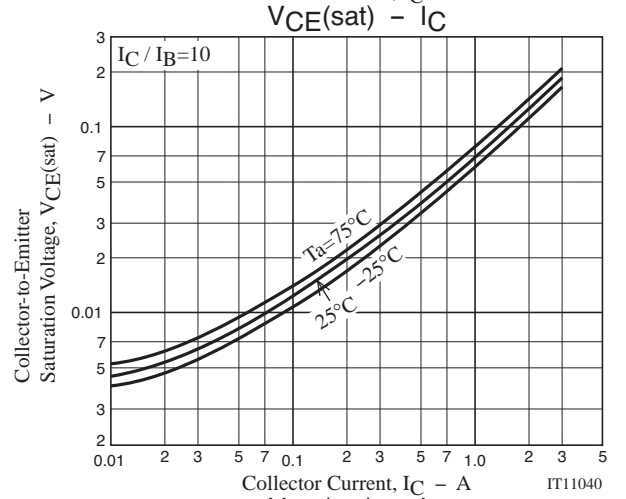
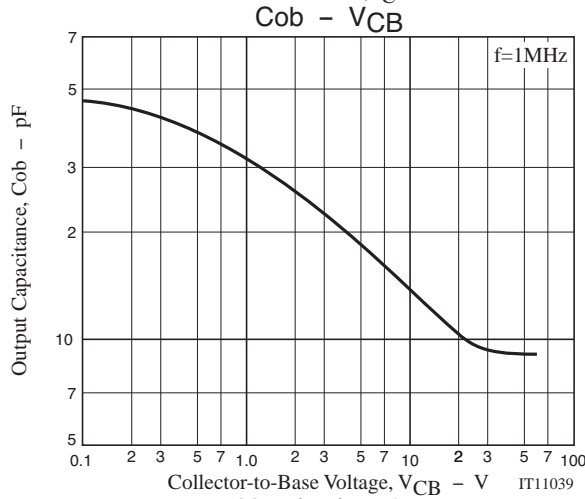
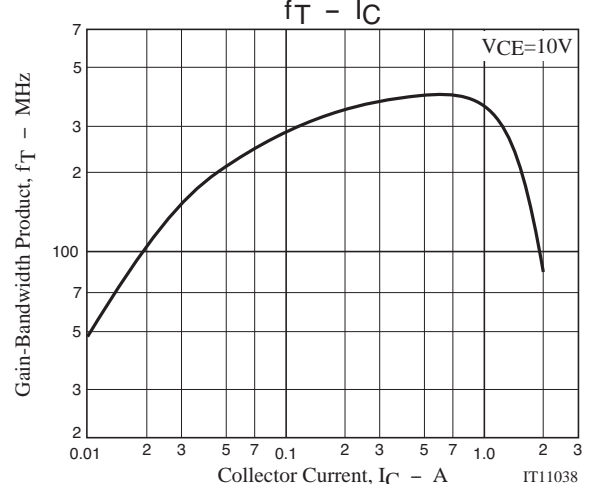
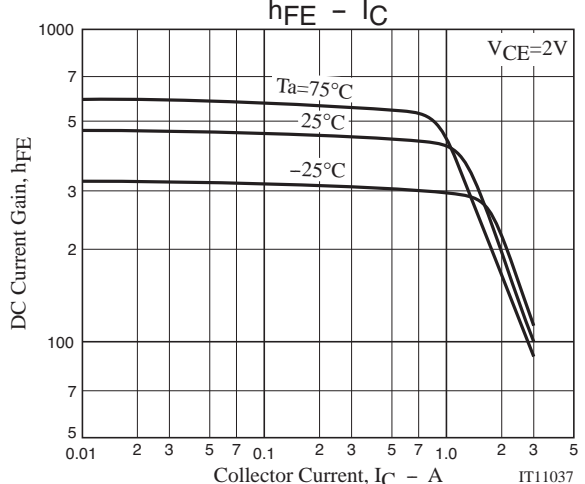
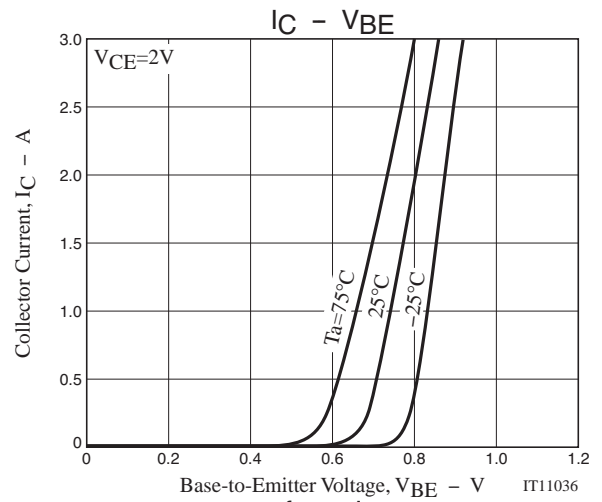
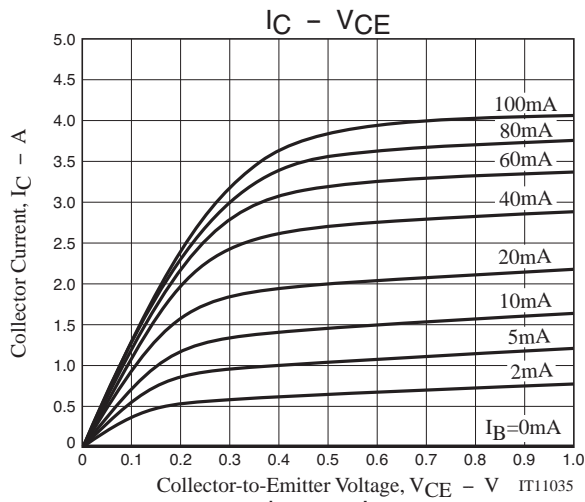
### Switching Time Test Circuit

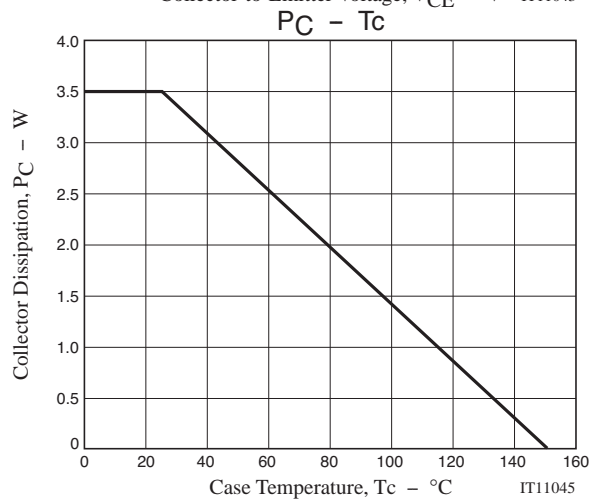
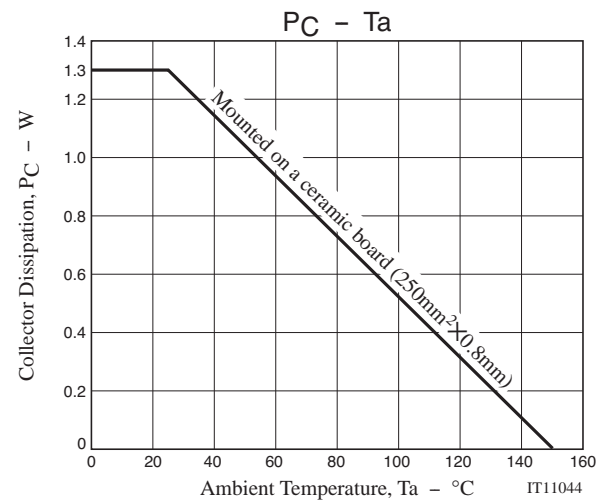
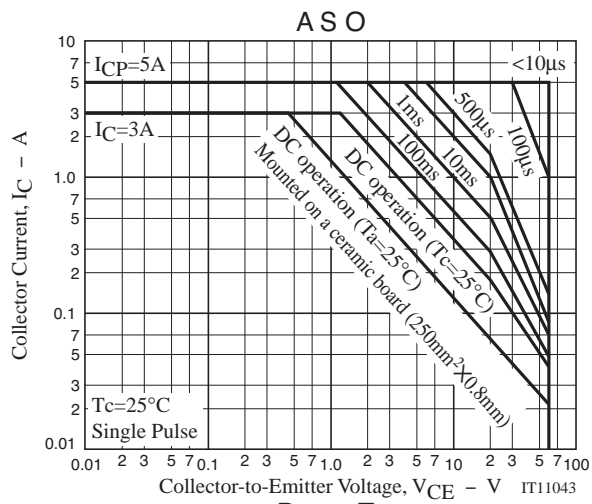


$$I_C=10I_{B1}=-10I_{B2}=0.5\text{A}$$

### Ordering Information

Device	Package	Shipping	memo
2SC6094-TD-E	PCP	1,000pcs./reel	Pb Free





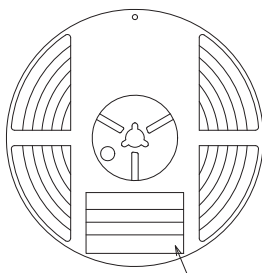
## Embossed Taping Specification

2SC6094-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

## Packing method



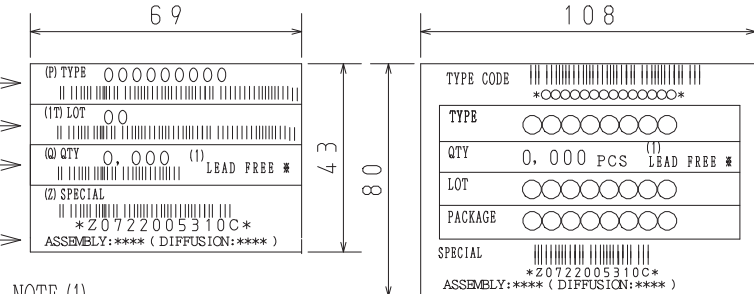
Reel label

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.



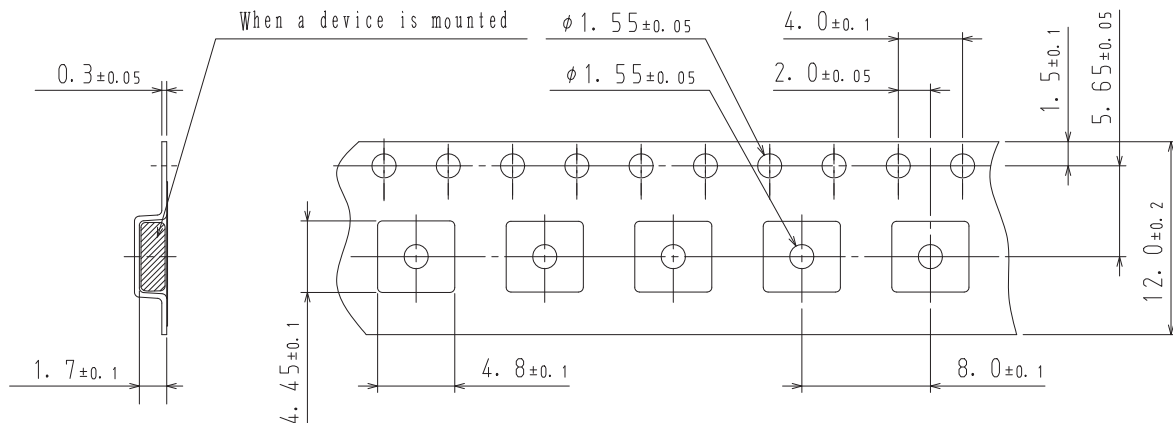
NOTE (1)

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

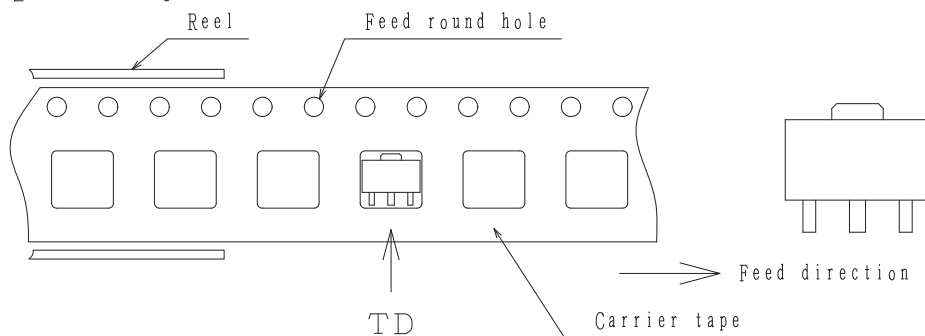
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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

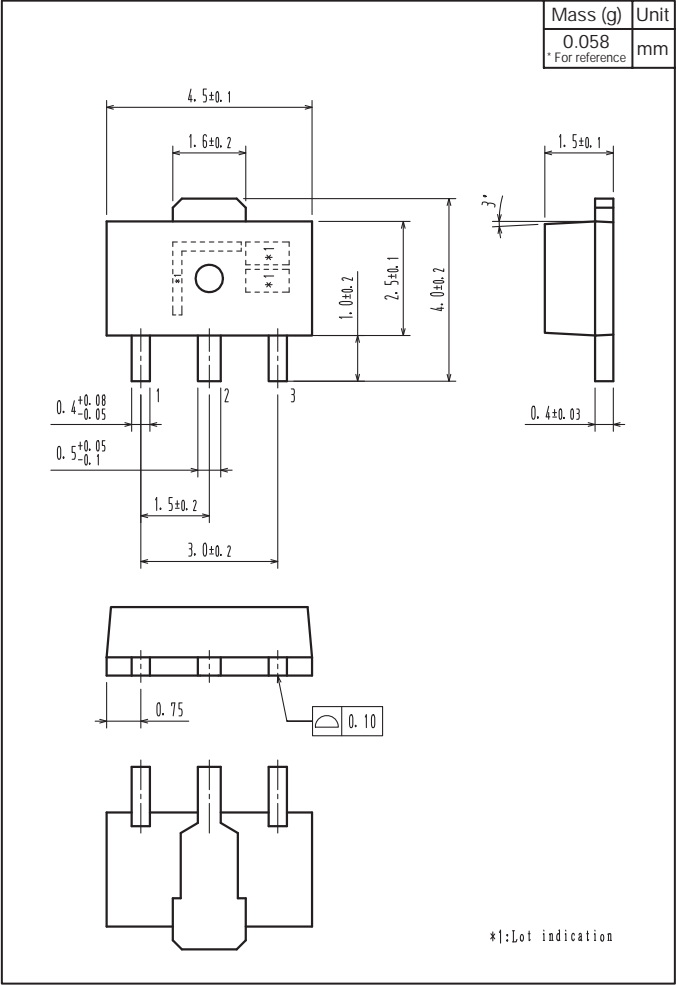


## 2-2. Device placement direction

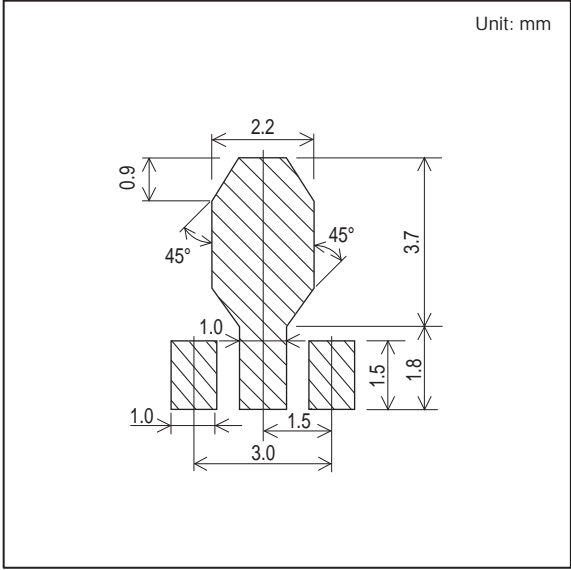


Those with pin 1 index on the feed hole side.....TD

Outline Drawing  
2SC6094-TD-E



Land Pattern Example



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