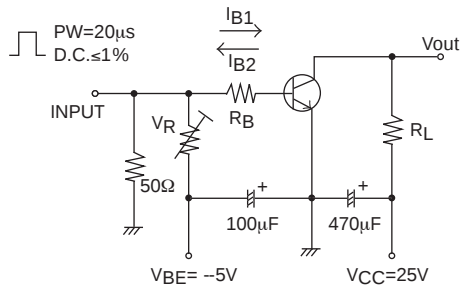


Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)50V, I_E=0A$			$(-)0.1$	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0A$			$(-)0.1$	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)2V, I_C=(-)500mA$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)10V, I_C=(-)500mA$		(260)290		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(45)25		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2.5A, I_B=(-)125mA$		$(-120)80$	$(-200)120$	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)2.5A, I_B=(-)125mA$		$(-)0.85$	$(-)1.2$	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	$(-50)100$			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	$(-)50$			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0A$	$(-)6$			V
Turn-On Time	t_{on}	See specified Test Circuit.		(30)30		ns
Storage Time	t_{stg}			(180)280		ns
Fall Time	t_f			(20)25		ns

Note : The specifications shown above are for each individual transistor.

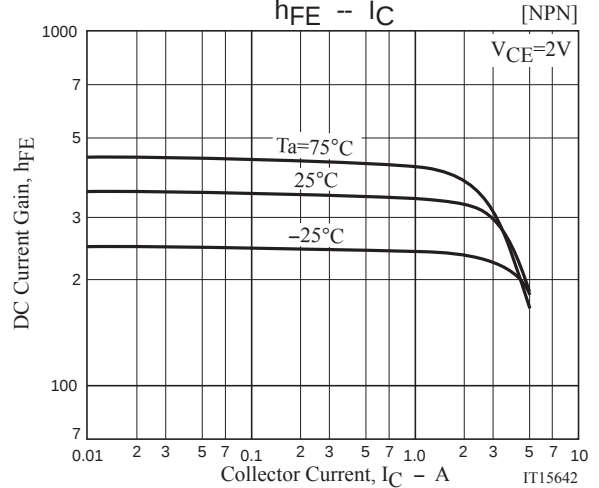
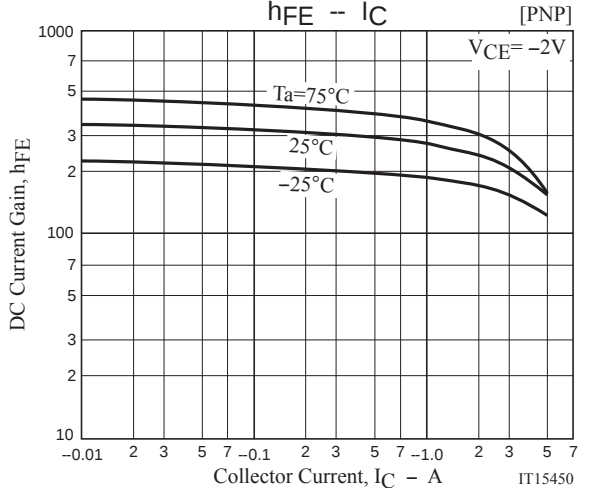
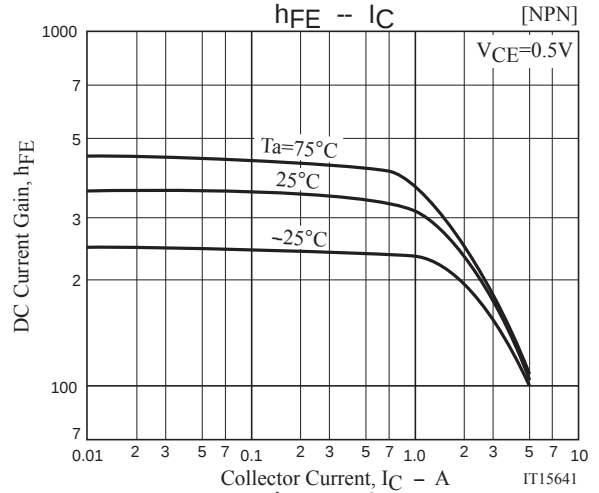
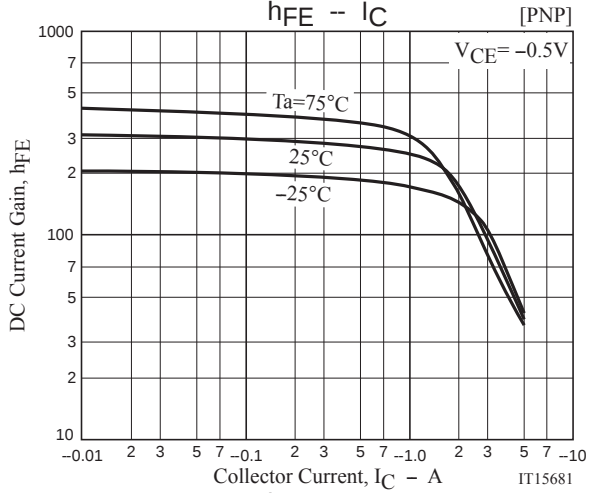
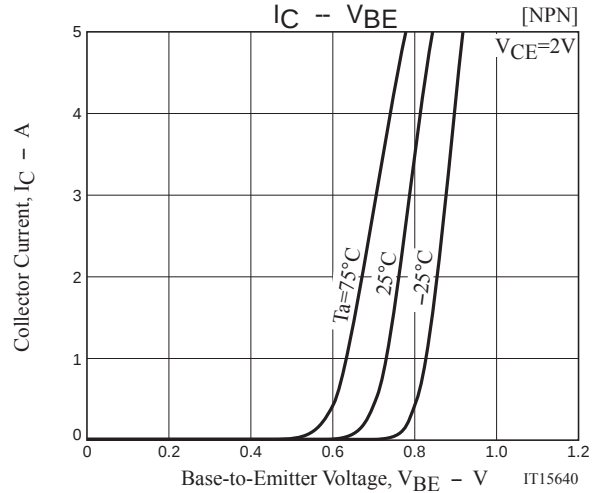
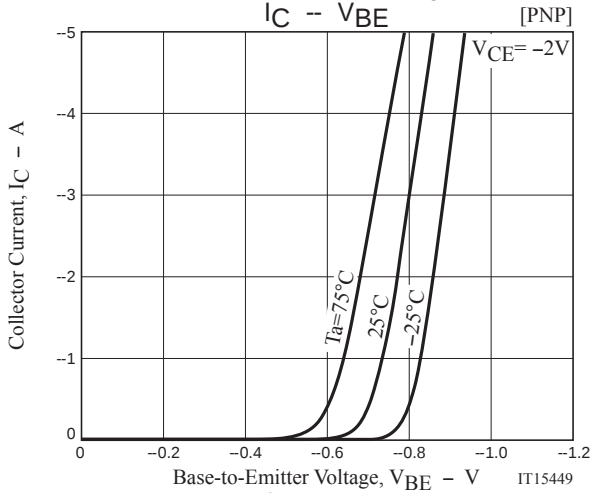
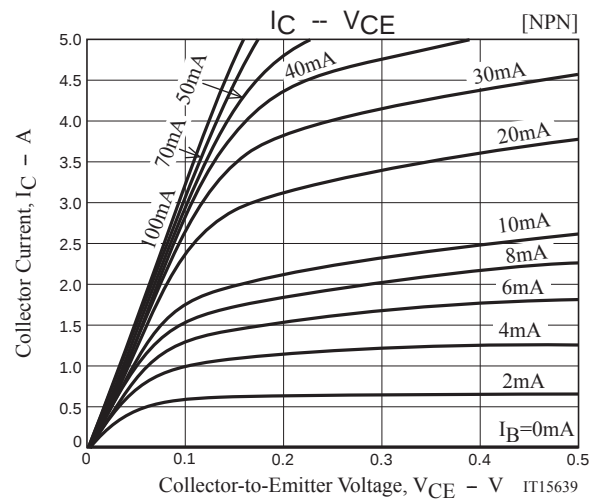
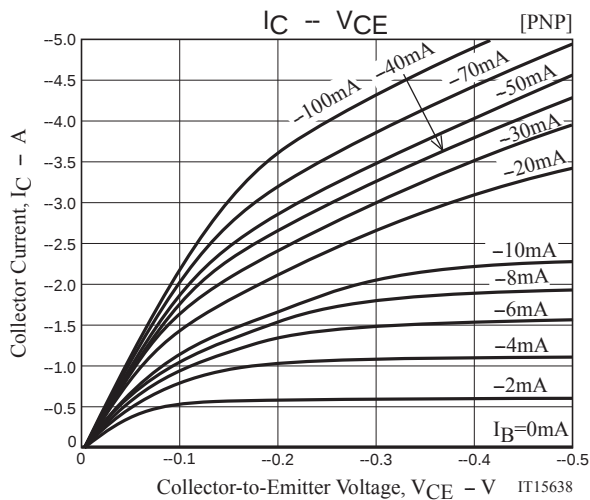
Switching Time Test Circuit

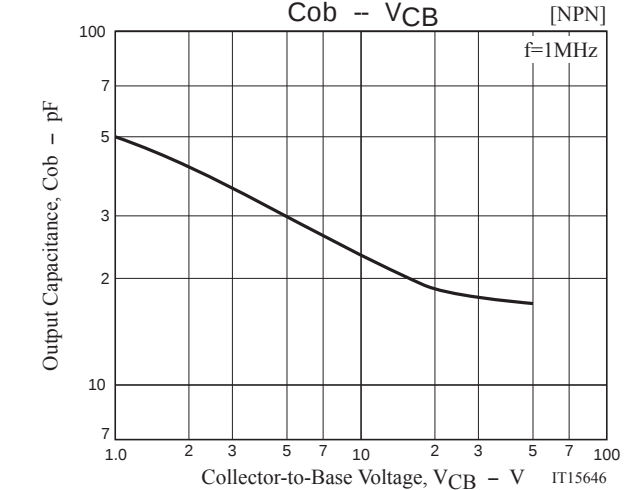
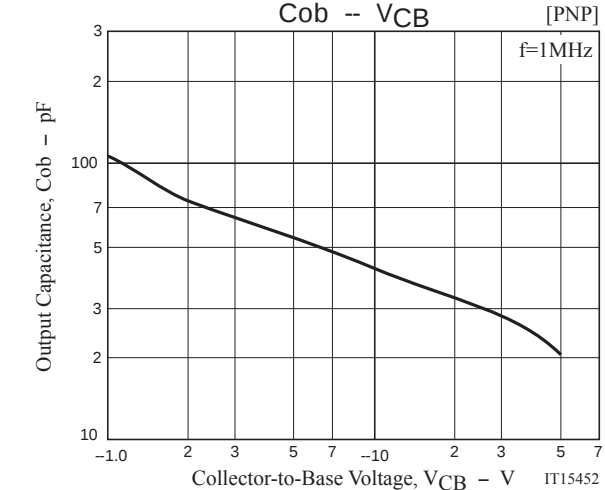
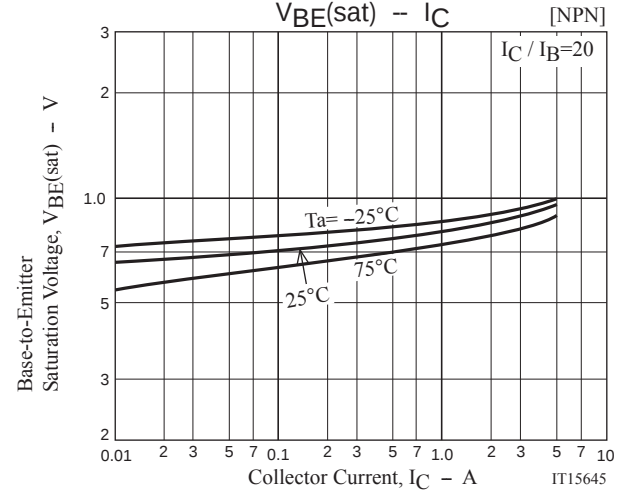
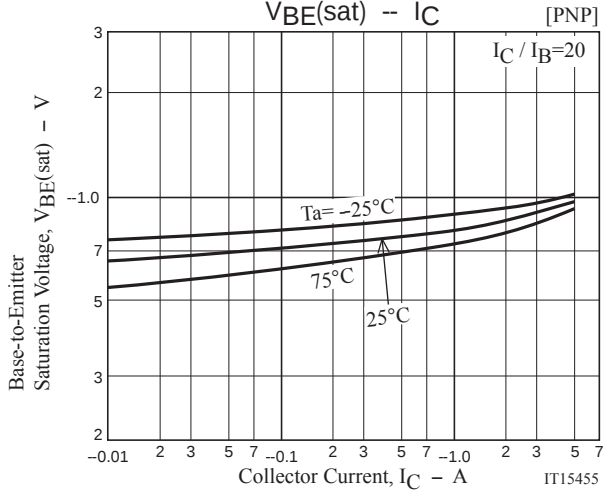
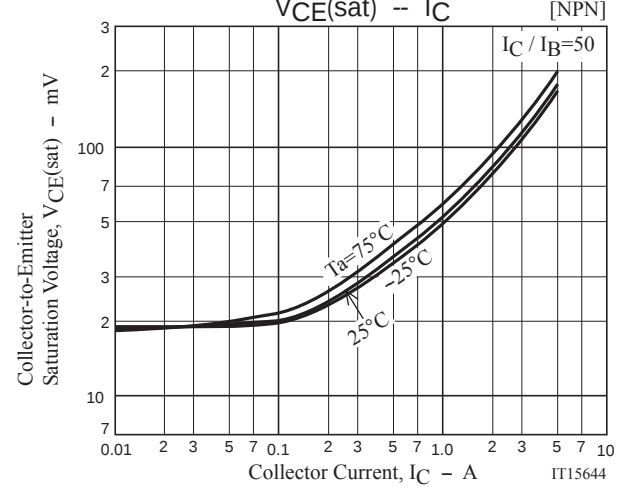
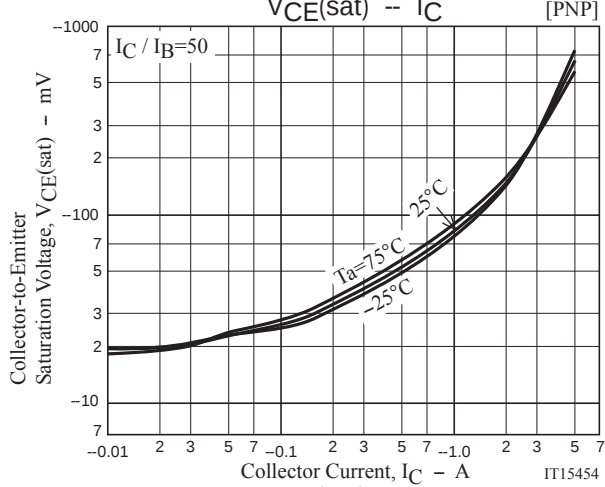
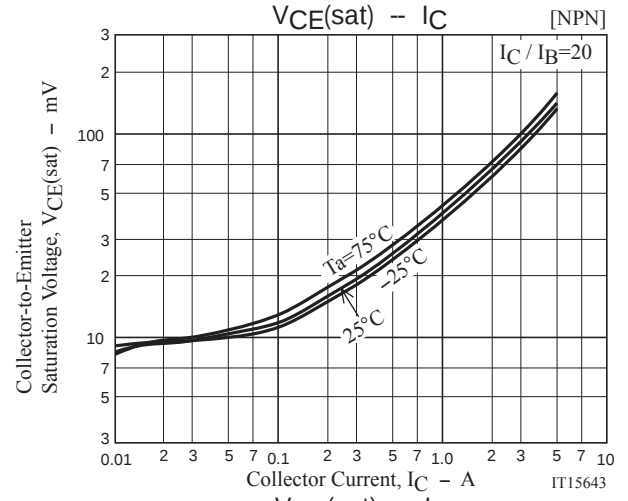
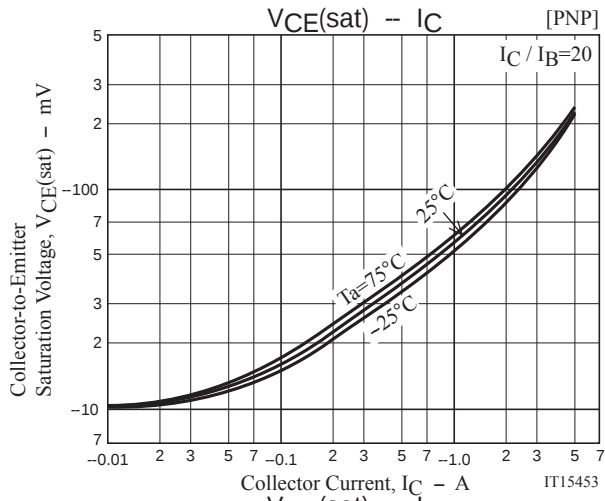


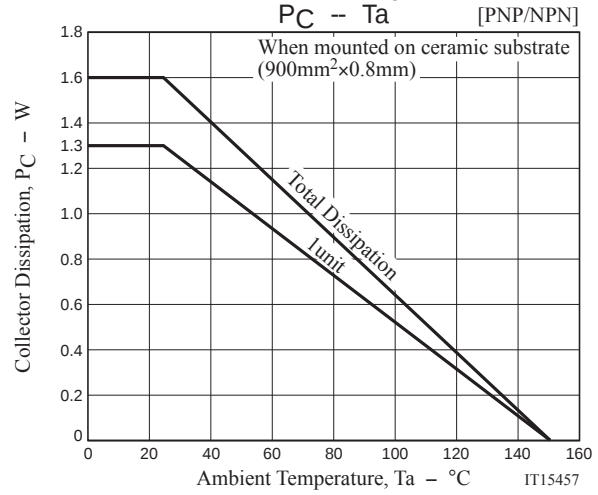
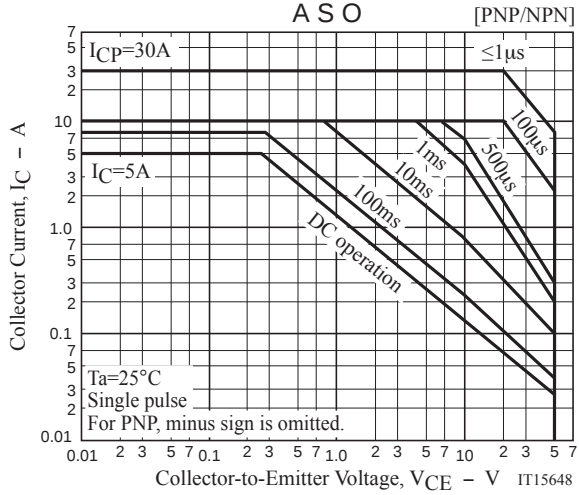
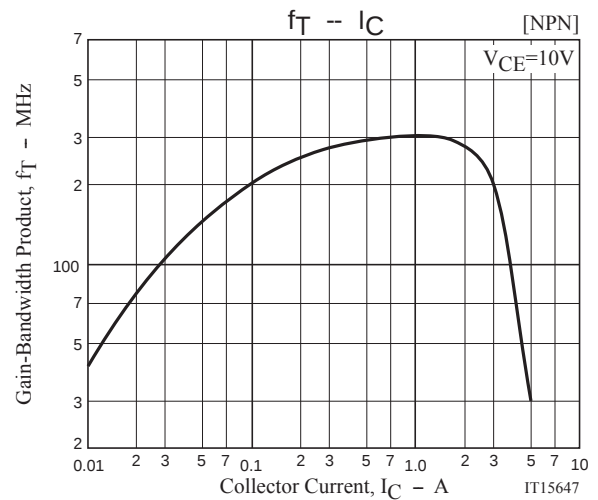
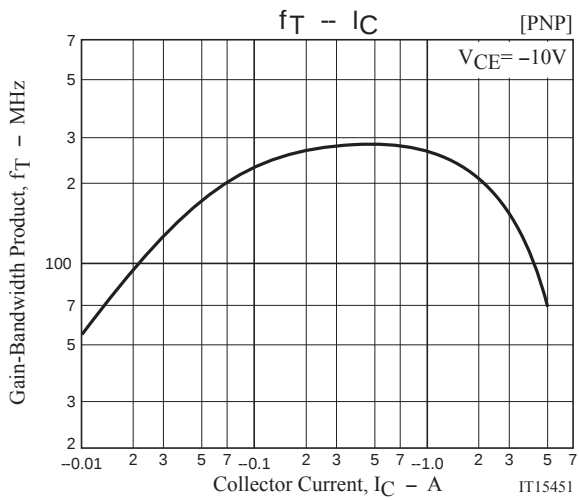
$I_C=20I_{B1}= -20I_{B2}=2.5A$
(For PNP, the polarity is reversed.)

Ordering Information

Device	Package	Shipping	memo
ECH8502-TL-H	ECH8	3,000pcs./reel	Pb Free and Halogen Free







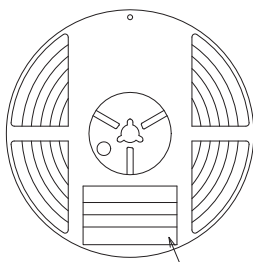
Embossed Taping Specification

ECH8502-TL-H

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)
ECH8	CPH6	3,000	15,000	90,000	5 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)

(P) TYPE	000000000
(1) LOT	00
(Q) QTY	0,000 (1) LEAD FREE *
(2) SPECIAL	
	20722005310C
	ASSEMBLY:**** (DIFFUSION:****)

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 CODE	00000000000000000000
TYPE	00000000
QTY	0,000 PCS (1) LEAD FREE *
LOT	00000000
PACKAGE	00000000
SPECIAL	
	20722005310C
	ASSEMBLY:**** (DIFFUSION:****)

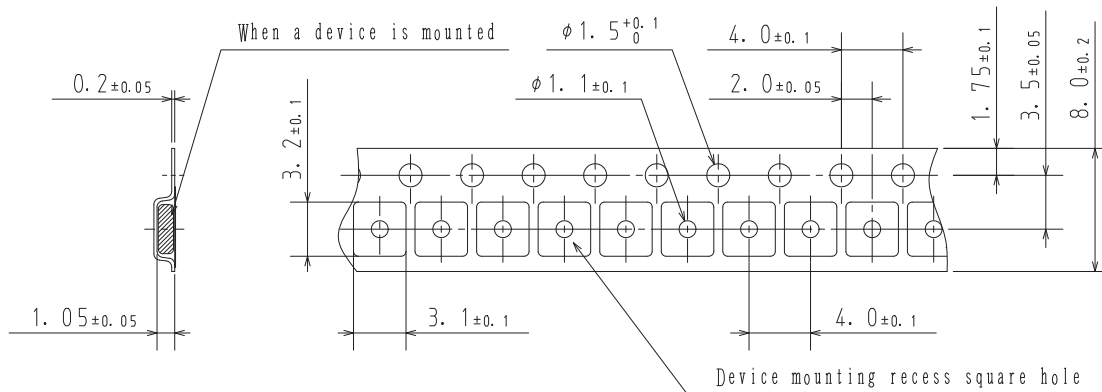
NOTE (1)

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

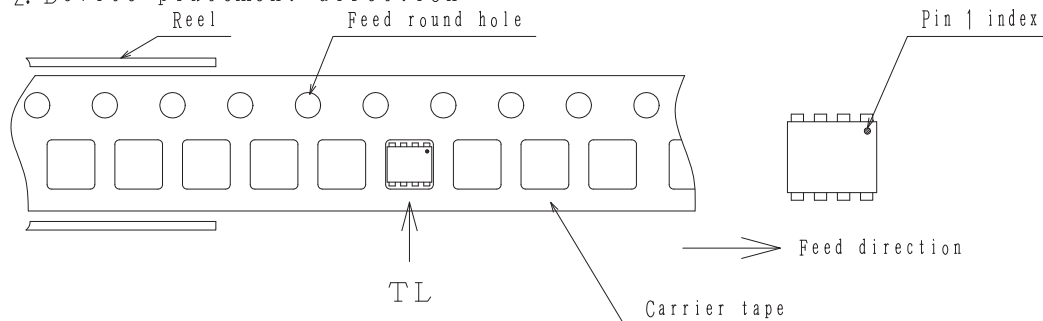
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

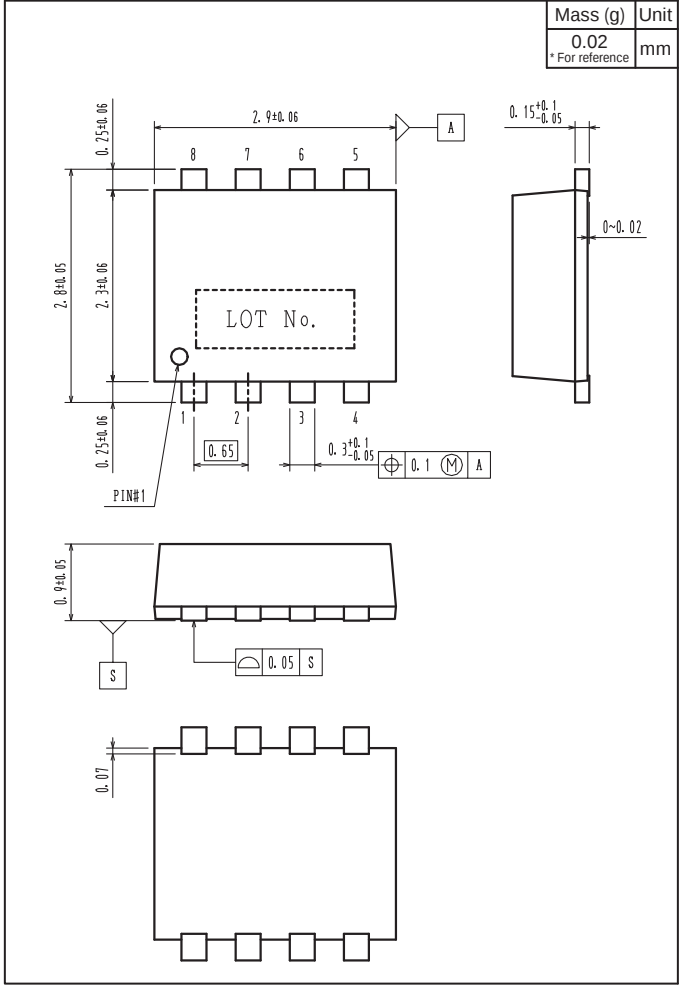


2-2. Device placement direction

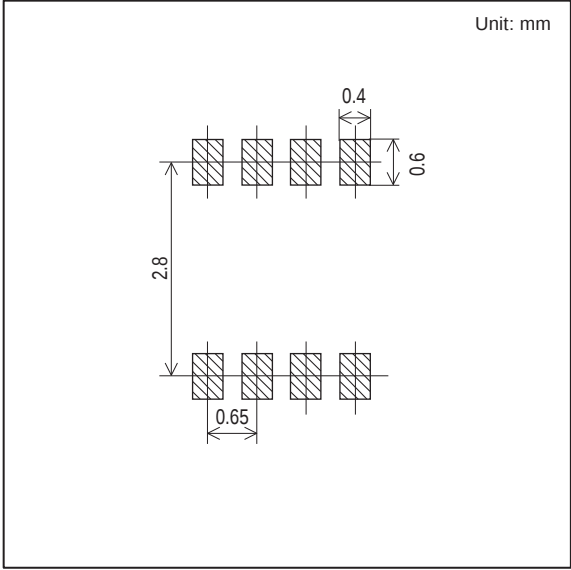


Those with pin 1 index on the feed hole side.....TL

Outline Drawing
ECH8502-TL-H



Land Pattern Example



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