



PCP1208 — NPN Epitaxial Planar Silicon Transistor LED Back Light

Features

- $V_{CE0}=200V$, $I_C=0.7A$
- High allowable power dissipation
- Halogen free compliance
- Low collector-to-emitter saturation voltage $V_{CE(sat)}=0.115V$ (typ.)@ $I_C=0.35A$
- High-speed switching $t_f=70ns$ (typ.)@ $I_C=0.3A$

Specifications

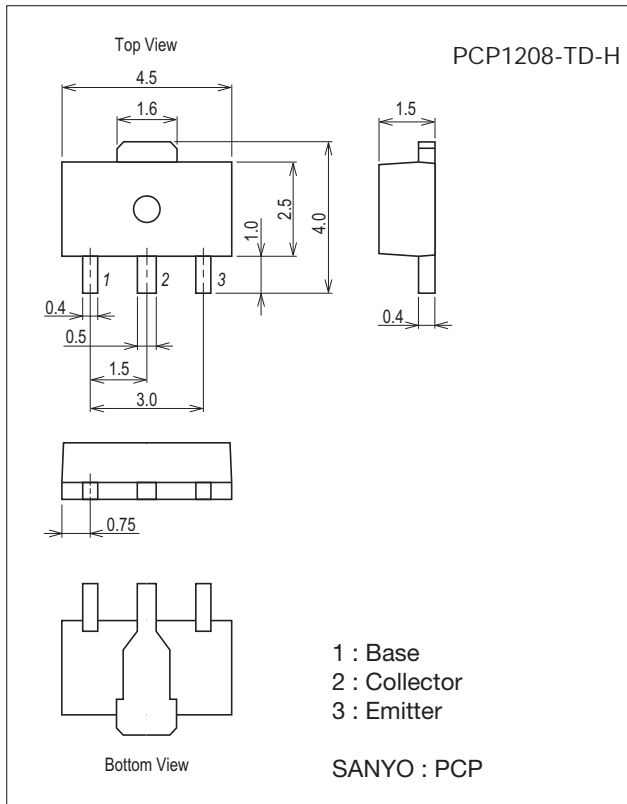
Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		220	V
Collector-to-Emitter Voltage	V_{CE0}		200	V
Emitter-to-Base Voltage	V_{EB0}		8	V
Collector Current	I_C		0.7	A
Collector Current (Pulse)	I_{CP}		2	A
Base Current	I_B		140	mA
Collector Dissipation	PC	When mounted on ceramic substrate (450mm ² ×0.8mm)	1.3	W
		$T_c=25^\circ C$	3.5	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions

unit : mm (typ)

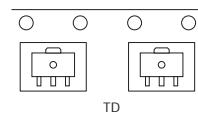
7007B-004



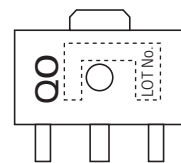
Product & Package Information

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

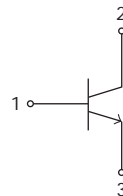
Packing Type: TD



Marking



Electrical Connection

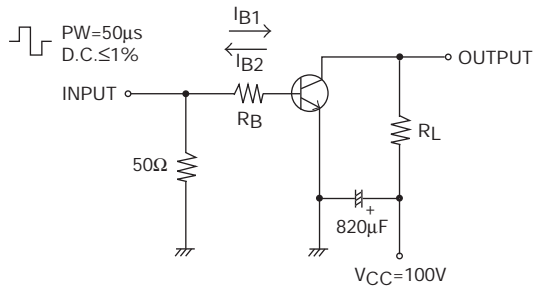


PCP1208

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=100V, I_E=0A$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0A$			1	μA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=100mA$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=100mA$		120		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		9		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.35A, I_B=35mA$		115	200	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.35A, I_B=35mA$		0.82	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0A$	220			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0A$	8			V
Turn-On Time	t_{on}	See specified Test Circuit.		50		ns
Storage Time	t_{stg}			2		μs
Fall Time	t_f			70		ns

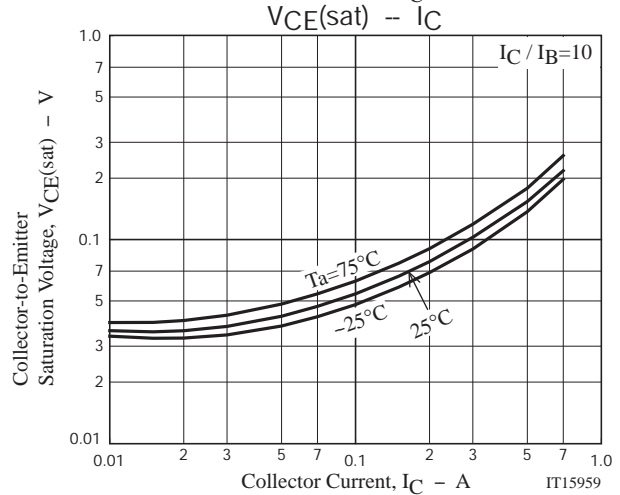
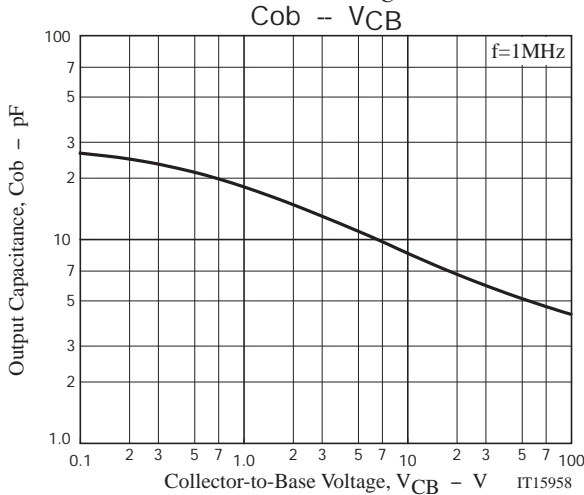
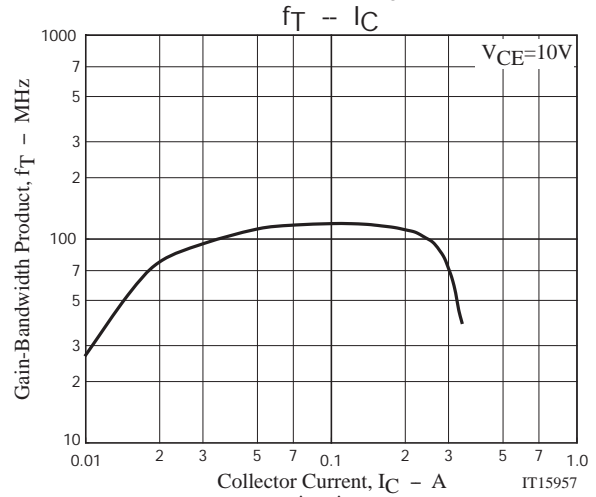
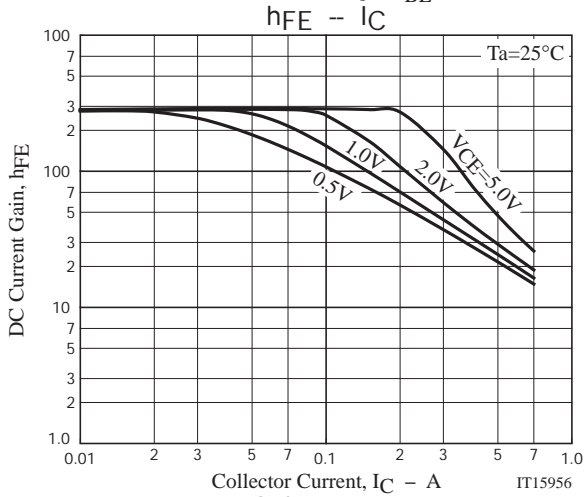
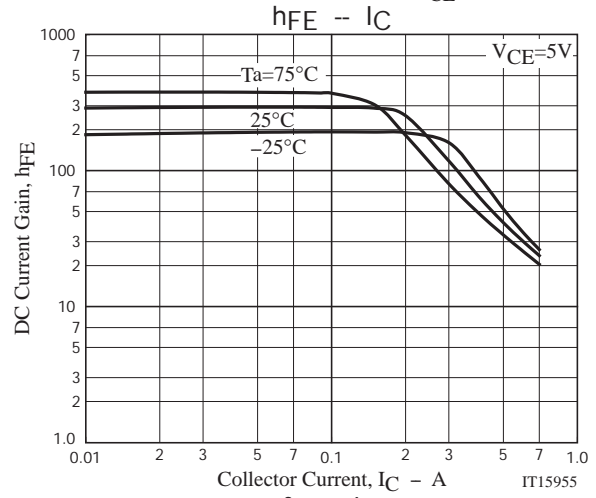
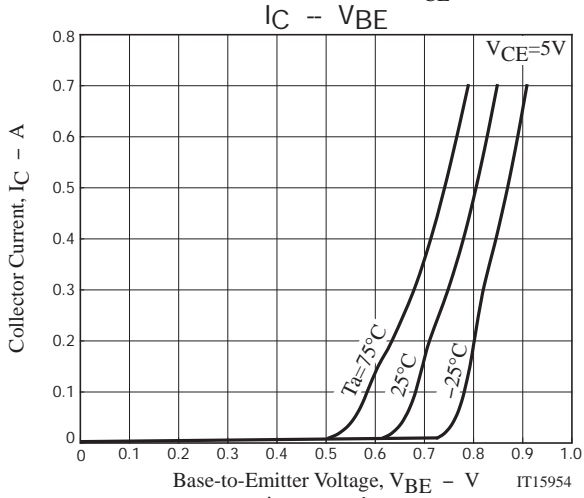
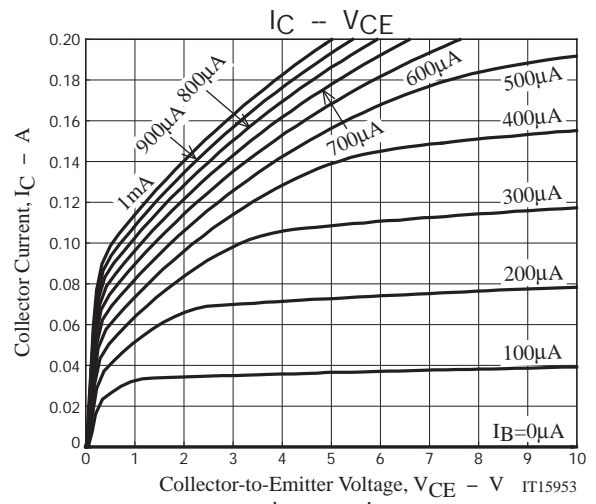
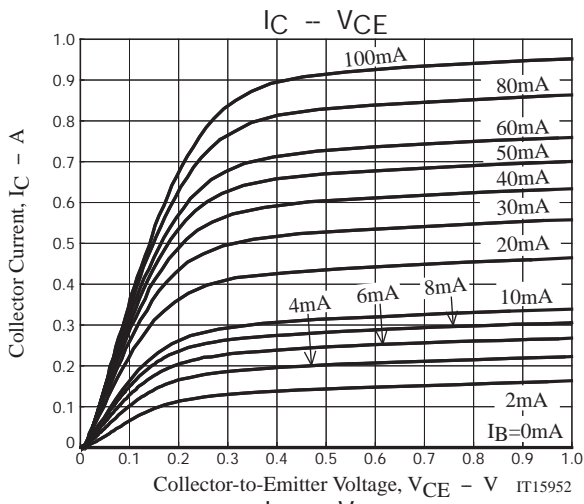
Switching Time Test Circuit

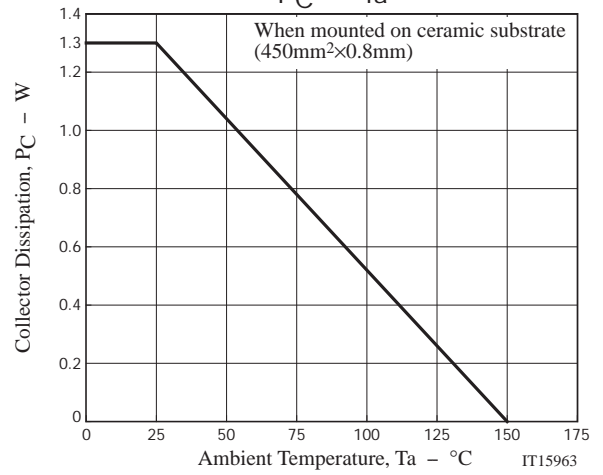
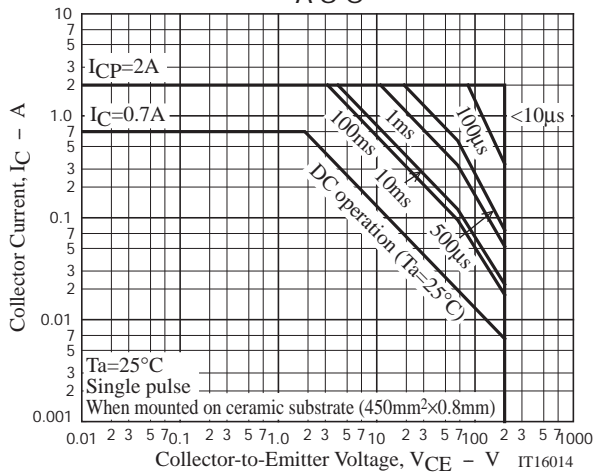
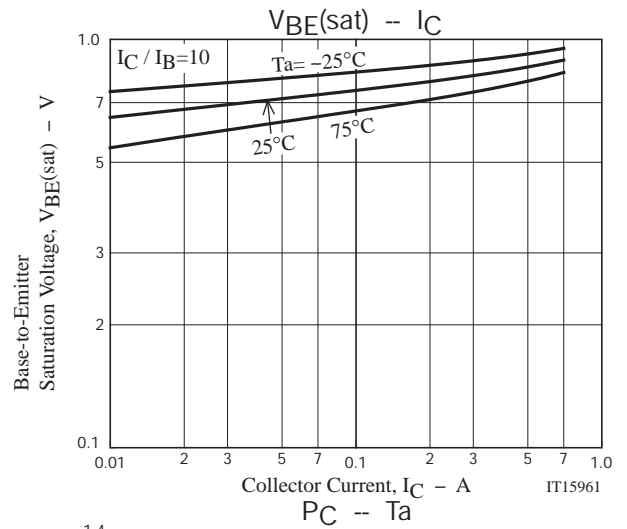
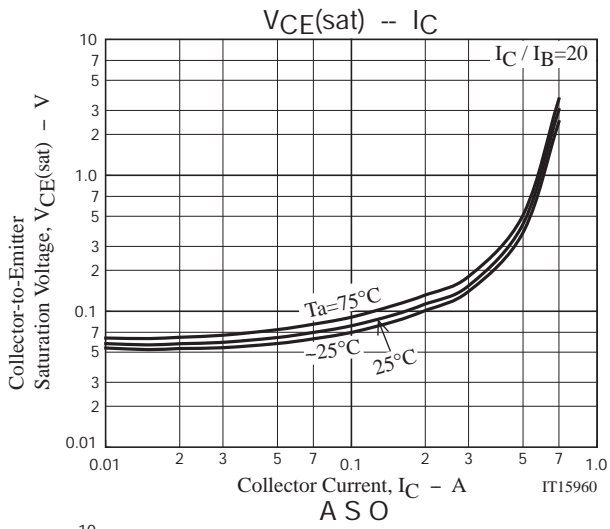


$$I_C=10I_{B1} = -10I_{B2}=0.3A$$

Ordering Information

Device	Package	Shipping	memo
PCP1208-TD-H	PCP	1,000pcs./reel	Pb Free and Halogen Free





PCP1208

Bag Packing Specification

PCP1208-TD-H

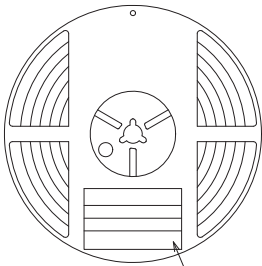
1. Packing Format

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)
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)

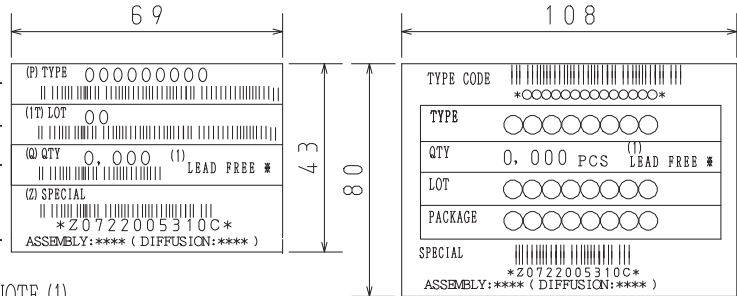
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



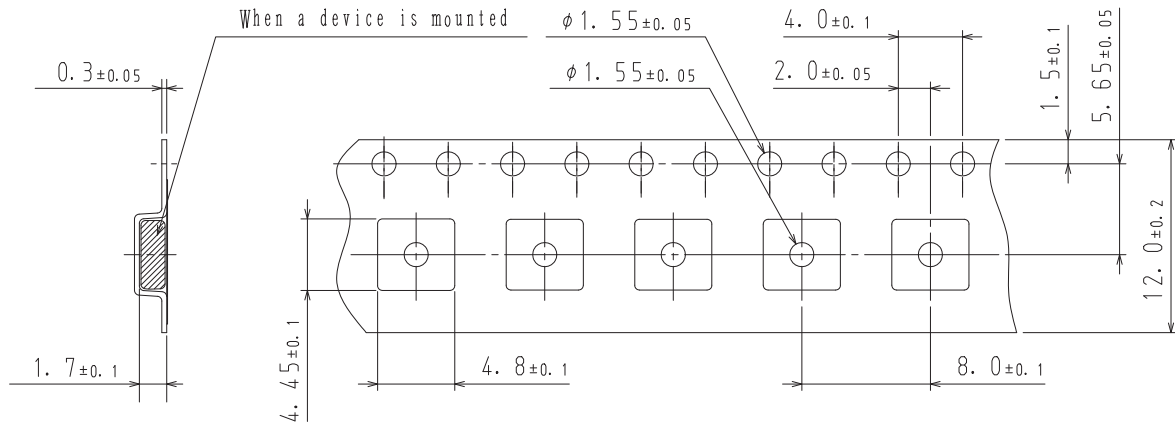
NOTE (1)

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

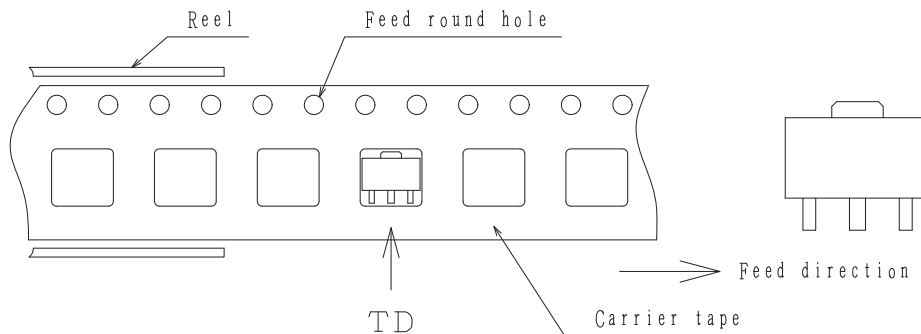
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



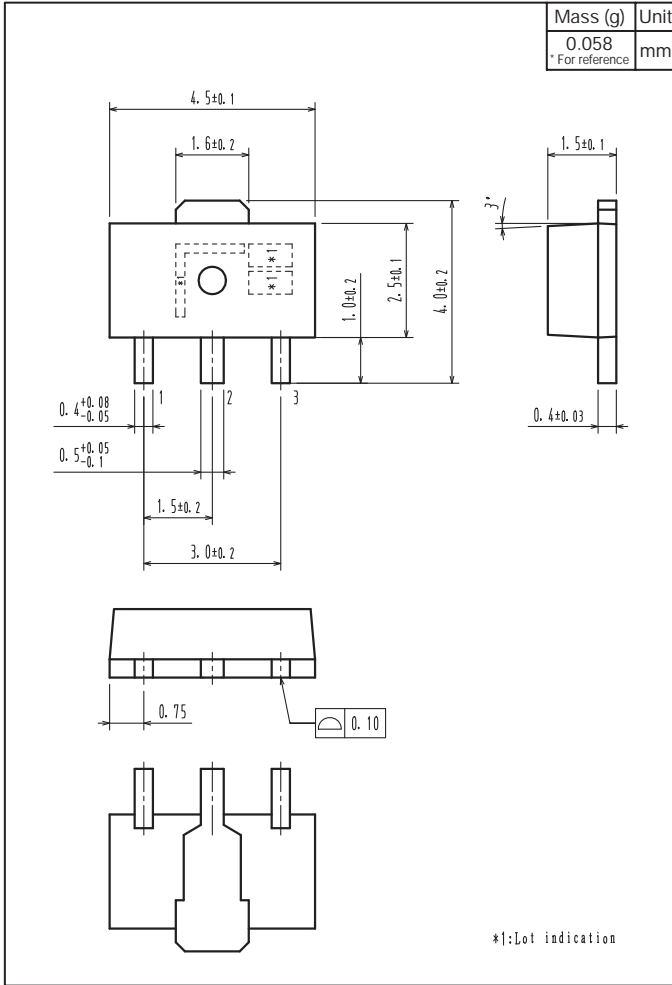
2-2. Device placement direction



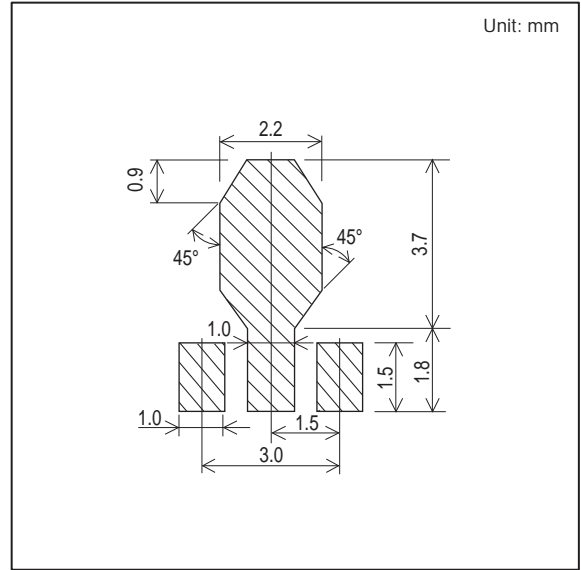
Those with pin 1 index on the feed hole side.....TD

PCP1208

Outline Drawing PCP1208-TD-H



Land Pattern Example



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