

Photo Transistor --ORT-PT3125H1

1. Scope:

- This specification applies to NPN Photo Transistor.

2. Structure:

- Top Side : alumnium alloy
- Bottom Side : silver alloy
- Passivation : Silicon Nitride

3. Size:

- Die Size : $(610\mu\text{m} \times 610\mu\text{m}) \pm 40\mu\text{m}$ (include scribe line)
- Thickness : $220\mu\text{m} \pm 30\mu\text{m}$
- Pad Size :
- Base : $(75\mu\text{m} \times 75\mu\text{m}) \pm 20\mu\text{m}$
- Emitter : $\Phi 170\mu\text{m} \pm 20\mu\text{m}$
- Active Area : $(432\mu\text{m} \times 432\mu\text{m}) \pm 20\mu\text{m}$
- Pattern Drawing: fig.1.

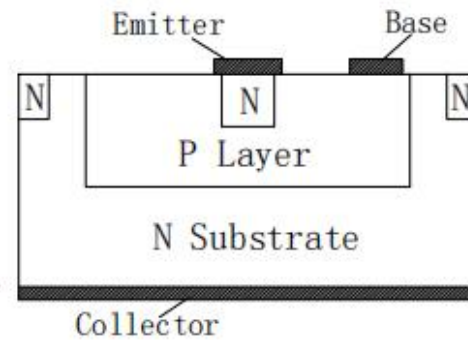
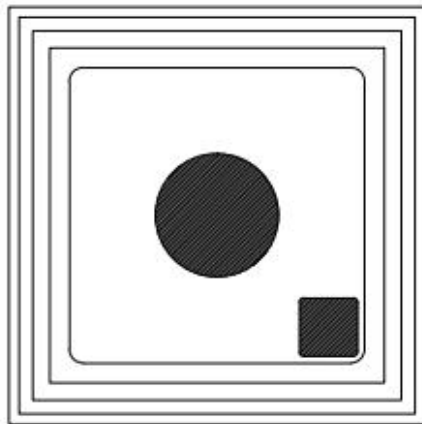


fig.1

4. Electro-Optical Characteristics:

($T_a = +25^\circ\text{C}$)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
C-E Leakage Current	I_{CEO}	$V_{CE}=20\text{V}$			100	nA
C-E Saturation Voltage	V_{CES}	$I_C=1\text{mA}, I_B=0.2\text{mA}$			200	mV
C-E Broken Voltage	BV_{CEO}	$I_{CE}=100\mu\text{A}$	80			V
C-B Broken Voltage	BV_{CBO}	$I_{CB}=50\mu\text{A}$	80			V
E-B Broken Voltage	BV_{EBO}	$I_{EB}=50\mu\text{A}$	7			V
E-C Broken Voltage	BV_{ECO}	$I_{EC}=10\mu\text{A}$	7			V
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=1\text{mA}$	200		3000	-

***Note** : BV_{ECO} : h_{FE} : 1500- ($BV_{ECO} = \text{Min.}4\text{V}$)



5. hfe Classification:

PT3125H1 3 series(1:1.3)

Classification	PT3125H1-3O	PT3125H1-3P	PT3125H1-3Q	PT3125H1-3R	PT3125H1-3S
hfe	200-260	260-340	320-420	380-500	440-580

Classification	PT3125H1-3T	PT3125H1-3U	PT3125H1-3A	PT3125H1-3B	PT3125H1-3C
hfe	500-650	550-720	600-780	660-860	720-940

Classification	PT3125H1-3D	PT3125H1-3E	PT3125H1-3F	PT3125H1-3G	PT3125H1-3H
hfe	780-1020	840-1100	900-1180	960-1260	1020-1340

Classification	PT3125H1-3I	PT3125H1-3J	PT3125H1-3K	PT3125H1-3L	PT3125H1-3M
hfe	1080-1420	1140-1500	1200-1580	1500-2000	2000-2600

Classification	PT3125H1-3N
hfe	2400-3000

PT3125H1 5 series(1:1.5)

Classification	PT3125H1-5I	PT3125H1-5J	PT3125H1-5K	PT3125H1-5L	PT3125H1-5A
hfe	200-300	300-450	400-600	500-750	600-900

Classification	PT3125H1-5B	PT3125H1-5C	PT3125H1-5D	PT3125H1-5E	PT3125H1-5F
hfe	700-1050	800-1300	900-1400	1100-1700	1300-2000

Classification	PT3125H1-5G	PT3125H1-5H
hfe	1500-2300	2000-3000

PT3125H1 7 series(1:1.7)

Classification	PT3125H1-7I	PT3125H1-7J	PT3125H1-7K	PT3125H1-7L	PT3125H1-7M
hfe	200-340	280-480	360-620	440-750	520-880

Classification	PT3125H1-7A	PT3125H1-7B	PT3125H1-7C	PT3125H1-7D	PT3125H1-7E
hfe	600-1020	680-1160	760-1300	840-1440	920-1580

Classification	PT3125H1-7F	PT3125H1-7G	PT3125H1-7H
hfe	1000-1700	1200-2000	1800-3000

6. Packing :

- Packing: Sheet Type

7. Application Notes:

- All data are measured by Orient's tester on bare chips within 98% of the nominal value.