

Photo Transistor --ORT-PT3018H2

1. Scope:

- This specification applies to NPN Photo Transistor.

2. Structure:

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

3. Size:

- Die Size : $(458\mu\text{m} \times 458\mu\text{m}) \pm 40\mu\text{m}$ (include scribe line)
- Thickness : $220\mu\text{m} \pm 20\mu\text{m}$
- Emitter : $\Phi 120\mu\text{m} \pm 20\mu\text{m}$
- Active Area : $(342\mu\text{m} \times 342\mu\text{m}) \pm 20\mu\text{m}$
- Pattern Drawing: fig.1.

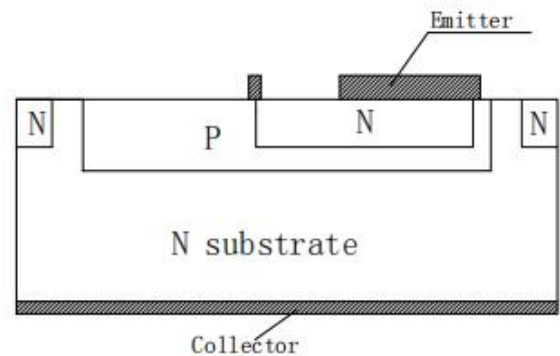
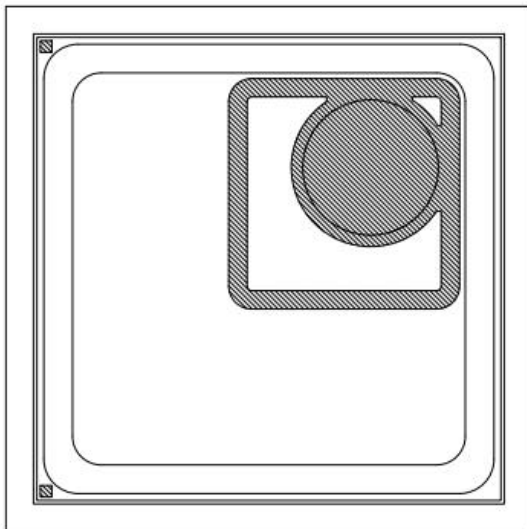


fig.1

4. Electro-Optical Characteristics:

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
C-E Leakage Current	I_{CEO}	$V_{CE}=20\text{V}$, $H=0\text{mw}/\text{cm}^2$			50	nA
C-E Saturation Voltage	V_{CES}	$I_C=1\text{mA}$, $I_B=0.2\text{mA}$			250	mV
C-E Voltage	BV_{CEO}	$I_{CE}=100\mu\text{A}$	80			V
E-C Voltage	BV_{ECO}	$I_{EC}=10\mu\text{A}$	7			V
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=1\text{mA}$	200			-
Rise/fall time	t_r/t_f	$V_{CE}=5\text{V}$, $I_c=2\text{mA}$, $R_L=100\Omega$		4/4		μs

*Note : BV_{ECO} : h_{FE} : 1500~ (BV_{ECO} = Min. 4V)



5. hfe Classification:

PT3018H2 3 series(1:1.3)

Classification	PT3018H2-3O	PT3018H2-3P	PT3018H2-3Q	PT3018H2-3R	PT3018H2-3S
hfe	200-260	260-340	320-420	380-500	440-580

Classification	PT3018H2-3T	PT3018H2-3U	PT3018H2-3A	PT3018H2-3B	PT3018H2-3C
hfe	500-650	550-720	600-780	660-860	720-940

Classification	PT3018H2-3D	PT3018H2-3E	PT3018H2-3F	PT3018H2-3G	PT3018H2-3H
hfe	780-1020	840-1100	900-1180	960-1260	1020-1340

Classification	PT3018H2-3I	PT3018H2-3J	PT3018H2-3K	PT3018H2-3L	PT3018H2-3M
hfe	1080-1420	1140-1500	1200-1580	1500-2000	2000-2600

Classification	PT3018H2-3N	PT3018H2-3V	PT3018H2-3W
hfe	2400-3000	1300~1690	1330~1800

PT3018H2 5 series(1:1.5)

Classification	PT3018H2-5I	PT3018H2-5J	PT3018H2-5K	PT3018H2-5L	PT3018H2-5A
hfe	200-300	300-450	400-600	500-750	600-900

Classification	PT3018H2-5B	PT3018H2-5C	PT3018H2-5D	PT3018H2-5E	PT3018H2-5F
hfe	700-1050	800-1300	900-1400	1100-1700	1300-2000

Classification	PT3018H2-5G	PT3018H2-5H
hfe	1500-2300	2000-3000

PT3018H2 7 series(1:1.7)

Classification	PT3018H2-7I	PT3018H2-7J	PT3018H2-7K	PT3018H2-7L	PT3018H2-7M
hfe	200-340	280-480	360-620	440-750	520-880

Classification	PT3018H2-7A	PT3018H2-7B	PT3018H2-7C	PT3018H2-7D	PT3018H2-7E
hfe	600-1020	680-1160	760-1300	840-1440	920-1580

Classification	PT3018H2-7F	PT3018H2-7G	PT3018H2-7H
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 99% of the nominal value.