Si Photo-transistor Chip－TKCS16PTS

1. Scope

- The specification applies to NPN silicon photo-transistor chip.
- Type：TKCS16PTS.

2. Structure

- NPN planar type.
- Electrode　N（collector）side　：Gold.
  P（base）side　：Aluminum.
  N（emitter）side　：Aluminum.

3. Size

- Chip size　：14.57mil × 14.57mil ± 1.5mil (0.37mm × 0.37mm ± 0.038mm)
- Thickness　：7mil ± 1mil (0.175mm ± 0.025mm)
- Active area　：11.2mil × 11.2mil ± 0.5mil (0.286mm × 0.286mm ± 0.013mm)
- Base pad size　：diameter 3.15mil ± 0.4mil (0.08mm ± 0.01mm)
- Emitter pad size：5.43mil × 5.43mil ± 0.4mil (0.138mm × 0.0138mm ± 0.01mm)
- Pattern drawing：per fig. 1

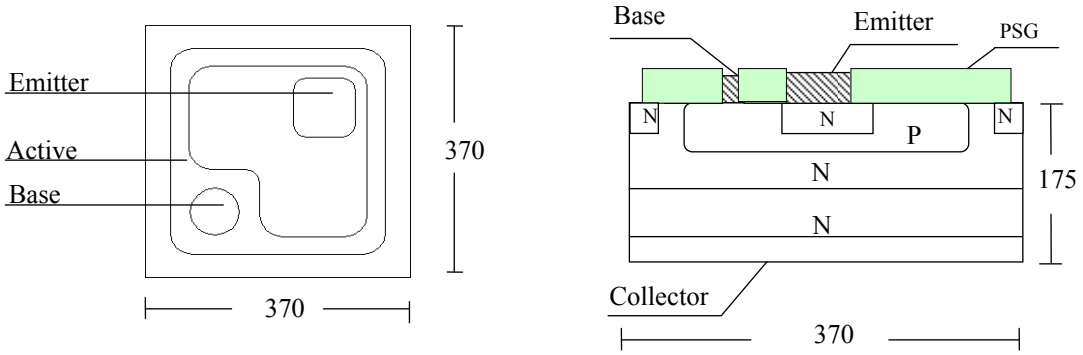
4. Electro-Optical Characteristics

(T_a =+25 ℃)

Parameter	Symbol	Condition	Min.	Typ.	Max	Unit
Collector-emitter Breakdown Voltage	BV_{CEO}	I_{CEO}=100uA	85			V
Emitter-collector Breakdown Voltage	BV_{ECO}	I_{ECO}=10uA　***Note1**	8.2			V
Collector-base Breakdown Voltage	BV_{CBO}	I_{CBO}=100uA	85			V
Collector Dark Current	I_{CEO}	V_{CE}=20V			30	nA
Collector Dark Current	I_{CEO}	V_{CE}=70V			150	nA
Collector-Emitter Saturation Voltage	VCE(Sat)	Ic=2mA, I_B=100uA			0.3	V
Peak Sensing Wavelength	λP			880		nm
DC Current Amplification Factor	hFE	V_{CE}=5V, IC=2mA Rank A1	200		400	
		Rank A	400		600	
		Rank B	500		750	
		Rank C	600		900	
		Rank D	800		1200	
		Rank E	1000		1500	
		Rank F	1200		1800	
		Rank H	1500		2300	

* Note 1：BV_{ECO}＞8.2 限 BIN（A1, A, B, C, D, E, F, H）

* Note 2：Tj＞140℃



Unit：mil

fig. 1

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