■ New ☐ Rev

# APPROVAL SHEET

CUSTOMER :

DEVICE NAME : **PHOTO TRANSISTOR**

MODEL NO. : **SPT-39144-H6**

ISSUED DATE : **AUG.23. 2012**

| | ISSUE | REVIEW | REVIEW | APPR'D |
|---|---|---|---|---|
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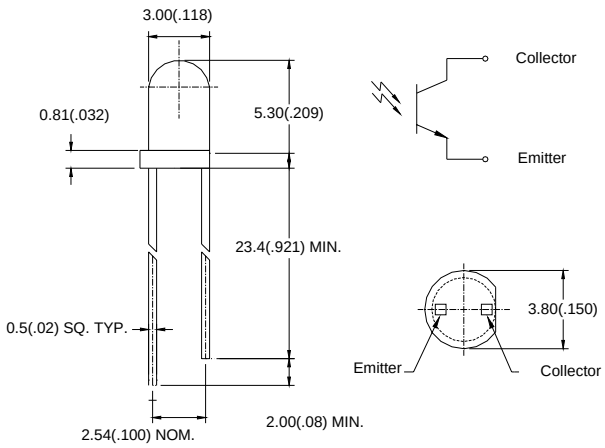
# *END- LOOK PACKAGE PHOTOTRANSISTOR*

## ● Features:

1. Wide range of collector current.
2. high sensitivity.
3. Low cost plastic package.
4. Lens Appearance: Black.
5. This product doesn't contain restriction substance, comply ROHS standard

## ● Package dimensions:




NOTES:
1.All dimensions are in millimeters (inches).
2.Tolerance is ±0.25mm (0.01') unless otherwise specified.
3.Lead spacing is measured where the leads emerge from the package
4.Specifications are subject to change without notice

## ● Description :

The SPT-39144-H6 is a NPN silicon phototransistor mounted in a lensed ,water clear plastic package . The lensing effect of the package allows an acceptance half view angle of 30°that is measured from the optical axis to the half power point

## ● Absolute Maximum Ratings(Ta=25℃)

| Parameter | Maximum Rating | Unit |
|---|---|---|
| Power Dissipation | 100 | mW |
| Collector- Emitter Voltage | 30 | V |
| Emitter- Collector Voltage | 5 | V |
| Operating Temperature | -45℃~+85℃ | |
| Storage Temperature Range | -45℃~+100℃ | |
| Lead Soldering Temperature | 260℃ for 5 seconds | |

*1Condition for IFP is pulse of 1/10 duty and 0.1msec width.

## ● Electrical and optical characteristics(Ta=25℃)

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|---|---|---|---|---|---|---|
| Collector- Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 30 | - | - | V | $I_C$=0.1mA Ee=0mW/cm² |
| Emitter-Collector Breakdown Voltage | $V_{(BR)ECO}$ | 5 | - | - | V | $I_R$=0.1mA Ee=0 mW/cm² |
| Collector- Emitter Saturation Voltage | $V_{CE(SAT)}$ | - | - | 0.5 | V | $I_C$=0.1 mA Ee=1.0 mW/cm² |
| Rise Time | $T_r$ | - | 10 | - | μS | Vcc=5V $R_L$=1KΩ $I_C$=1mA |
| Fall Time | $T_f$ | - | 15 | - | μS | Vcc=5V $R_L$=1KΩ $I_C$=1mA |
| Collector Dark Current | $I_{CEO}$ | - | - | 100 | nA | $V_{CE}$=10V $E_e$=0 mW/cm² |
| On State Collector Current | $I_{C(ON)}$ | - | 3.5 | - | mA | $V_{CE}$=5V $E_e$=1.0mW/cm² |

## ● Typical Optical-Electrical Characteristic Curves

FIG.1 Dark Current Vs. Ambient Temperature

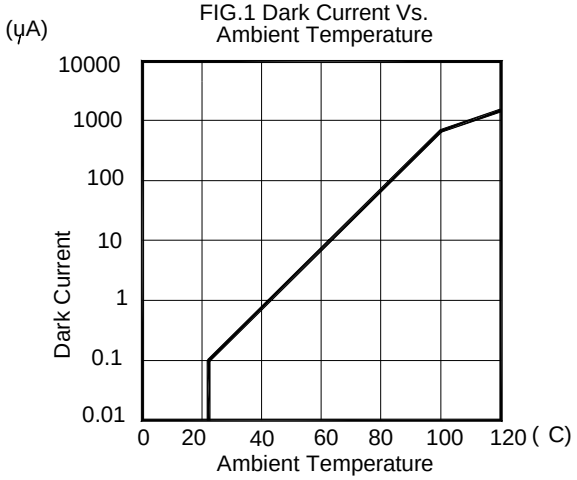



FIG.2 Power Dissipation Vs. Ambient Temperature

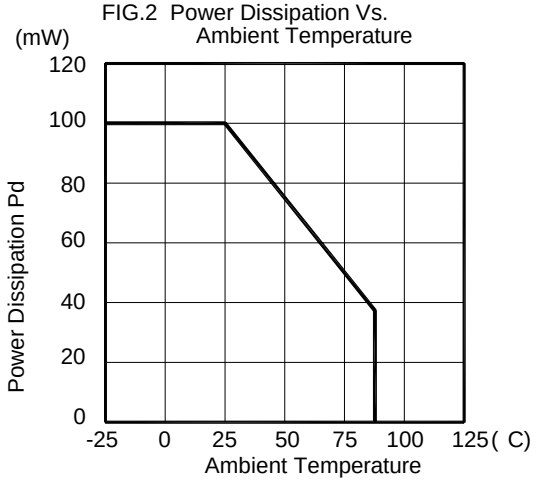



FIG.3 Rise And Fall Time Vs. Load Resistance

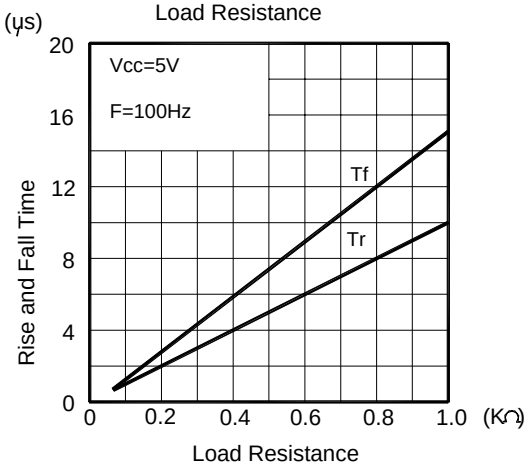
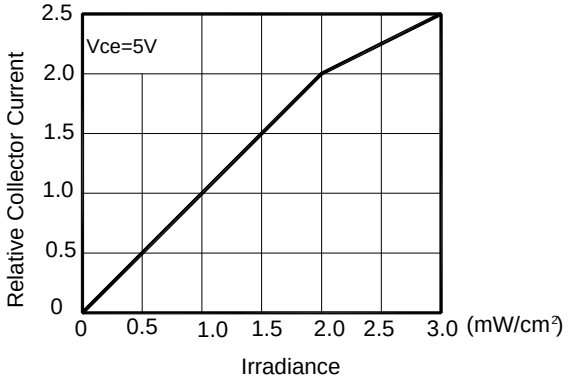



FIG.4 Relative Collector Current Vs. Irradiance



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