

Plastic Silicon Infrared Phototransistor

QSD123, QSD124

Description

The QSD123/124 is a phototransistor encapsulated in an infrared transparent, black T-1 3/4 package.

Features

- PNP Silicon Phototransistor
- Package Type: T-1 3/4



QSD123, QSD124

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ C}$)

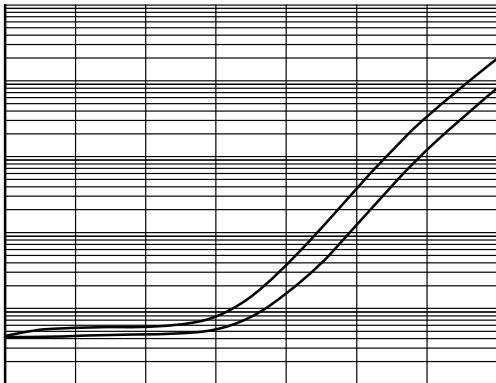
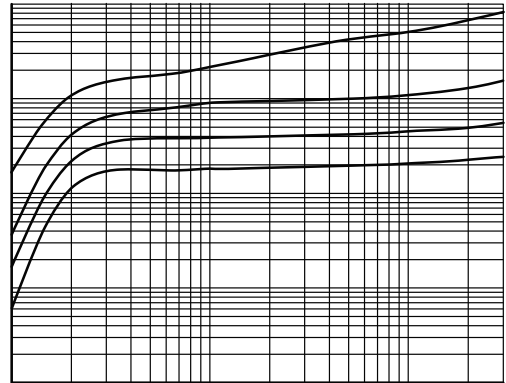
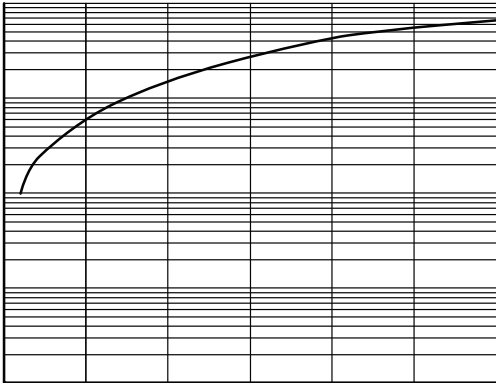
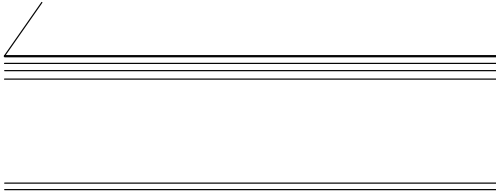
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
λ_{PS}	Peak Sensitivity Wavelength		–	880	–	nm
	Reception Angle		–	± 12	–	
I_{CEO}	Collector–Emitter Dark Current	$V_{CE} = 10\text{ V}$, $E_e = 0$	–	–	100	nA
BV_{CEO}	Collector–Emitter Breakdown	$I_C = 1\text{ mA}$	30	–	–	V
BV_{ECO}	Emitter–Collector Breakdown	$I_E = 100\text{ }\mu\text{A}$	5	–	–	V
$I_{C(ON)}$	On–State Collector Current (Note 5) QSD123 QSD124	$E_e = 0.5\text{ mW/cm}^2$, $V_{CE} = 5\text{ V}$	4	–	16	mA
			6	–	29	
$V_{CE(SAT)}$	Saturation Voltage (Note 5)	$E_e = 0.5\text{ mW/cm}^2$, $I_C = 0.5\text{ mA}$	–	–	0.4	V
t_r	Rise Time	$V_{CC} = 5\text{ V}$, $R_L = 100\text{ }\Omega$, $I_C = 0.2\text{ mA}$	–	7	–	μs
t_f	Fall Time		–	7	–	μs

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

5. $\lambda = 880\text{ nm}$, AlGaAs.

QSD123, QSD124

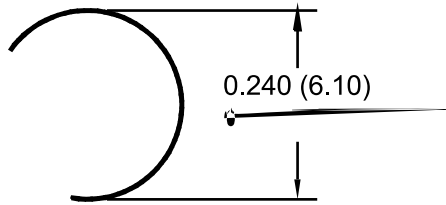
TYPICAL PERFORMANCE CHARACTERISTICS



T-1 3/4, 5MM DETECTOR
CASE 100CE
ISSUE 0

DATE 30 NOV 2016

J



(a) in/

onsemi, **onsemi**, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi**
