

Part Number: KTIR0921DS

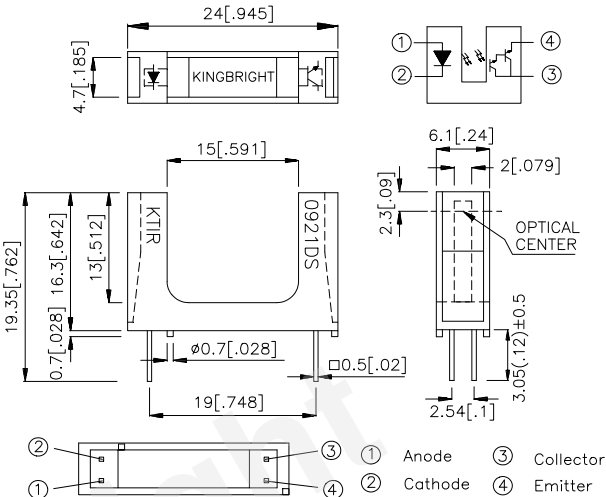
Package Dimensions

Features

- High sensing accuracy
- High current transfer ratio
- Both-sides mounting type
- RoHS compliant.

Applications

- OA equipment, such as floppy disk drives, printers, facsimiles, etc
- VCRs



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

Absolute Maximum Ratings (T_A=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I _F	50	mA
	Reverse voltage	V _R	6	V
	Power dissipation	P _D	75	mW
Output	Collector-emitter voltage	V _{CEO}	35	V
	Emitter-collector voltage	V _{ECO}	6	V
	Collector current	I _C	40	mA
	Collector power dissipation	P _C	75	mW
Operating temperature		T _{opr}	-25~+85	°C
Storage temperature		T _{stg}	-40~+100	°C
Soldering temperature (1/16 inch from body for 5 seconds)		T _{sol}	260	°C



Electro-optical Characteristics(Ta=25°C)

Parameter			Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage		V_F	$I_F=20\text{mA}$	1.0	1.2	1.5	V
	Peak forward voltage		V_{FM}	$I_{FM}=0.5\text{A}$	—	2	3	V
	Reverse current		I_R	$V_R=6\text{V}$	—	—	10	μA
Output	Collector dark current		I_{CEO}	$V_{CE}=10\text{V}, I_F=0\text{mA}$	—	—	10^{-6}	A
Transfer Characteristics	Current transfer ratio		CTR	$V_{CE}=2\text{V}$ $I_F=1\text{mA}$	—	120	—	%
	Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_F=2\text{mA}$ $I_C=1\text{mA}$	—	—	1.0	V
	Response time	Rise time	t_r	$V_{CE}=2\text{V}$ $I_C=10\text{mA}$ $R_L=100\Omega$	—	90	400	μSec
		Fall time	t_f		—	80	300	μSec

Fig.1 Forward Current vs. Forward Voltage

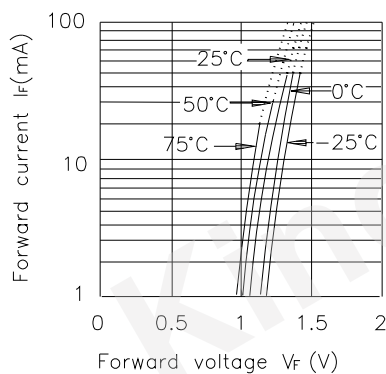


Fig.2 Collector Current vs. Forward Current

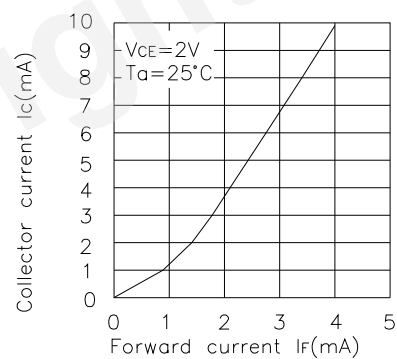


Fig.3 Collector Current vs. Collector-emitter Voltage

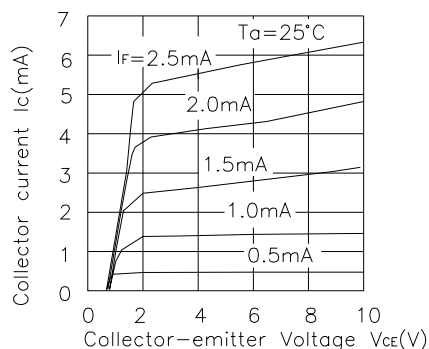


Fig.4 Collector Current vs. Ambient Temperature

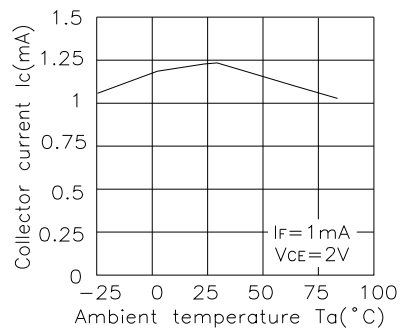


Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

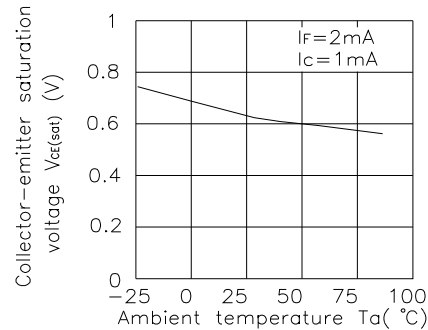


Fig.6 Relative Collector Current vs. Shield Distance(1)

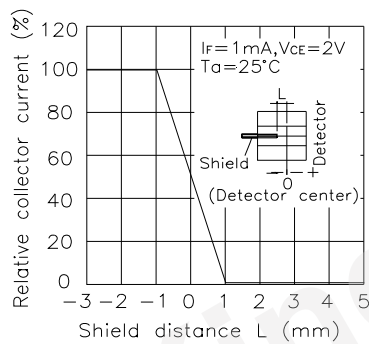


Fig.7 Relative Collector Current vs. Shield Distance(2)

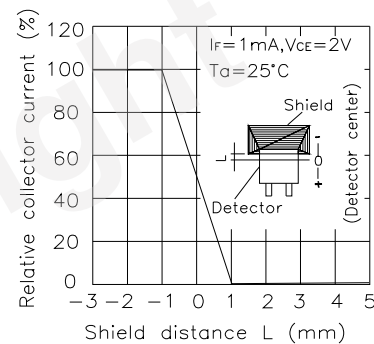
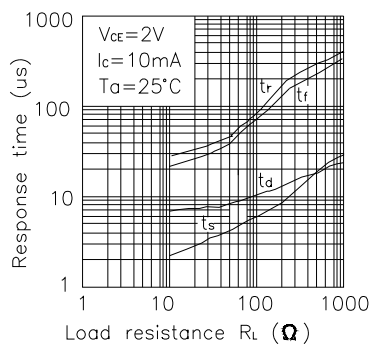


Fig.8 Response Time vs. Load Resistance



Test Circuit for Response Time

