

Part Number: KTIR0421DS

Features

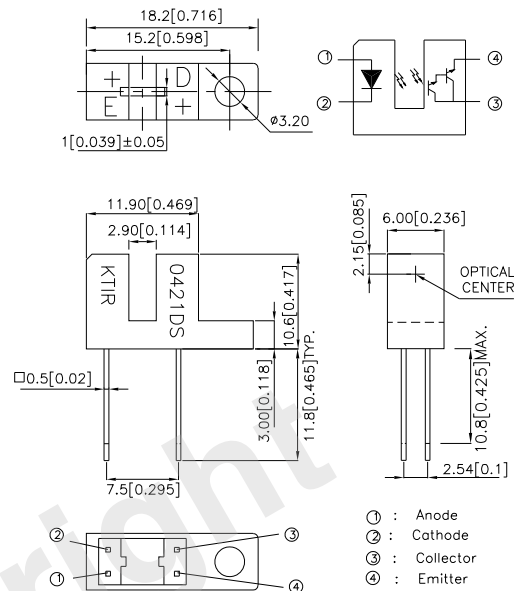
- High sensing accuracy.
- High current transfer ratio.
- Both-sides mounting type.
- RoHS Compliant.

Applications

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



Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ 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 ($T_A=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Input	Forward Current	I_F	50	mA
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	75	mW
	Peak Forward Current (Pulse Width $\leq 100\mu\text{s}$, Duty Cycle=1%)	I_{FP}	1	A
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	$^\circ\text{C}$
Storage Temperature		T_{stg}	-40~+100	$^\circ\text{C}$
Soldering Temperature (1/16 inch from body for 5 seconds)		T_{sol}	260	$^\circ\text{C}$

Electro-optical Characteristics (T_a=25°C)

Parameter			Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage		V _F	I _F =20mA	1.0	1.2	1.5	V
	Peak forward voltage		V _{FM}	I _{FM} =0.5A	—	2	3	V
	Reverse current		I _R	V _R =6V	—	—	10	μA
Output	Collector dark current		I _{CEO}	V _{CE} =10V, I _F =0mA	—	—	10 ⁻⁶	A
Transfer charact- eristics	Current transfer ratio		CTR	V _{CE} =2V, I _F =1mA	—	650	—	%
	Collector-emitter saturation voltage		V _{CE(sat)}	I _F =2mA, I _C =1mA	—	—	1.0	V
	Response time	Rise time	t _r	V _{CE} =2V, I _C =10mA R _L =100Ω	—	90	400	μsec
		Fall time	t _f		—	80	300	μsec

Fig.1 Forward Current vs. Forward Voltage

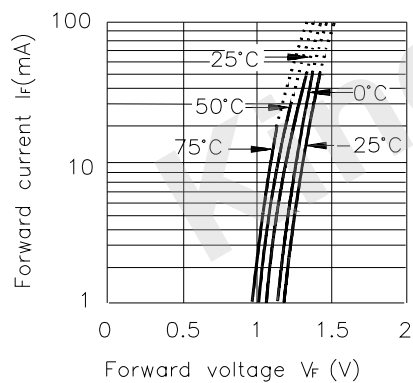


Fig.2 Collector Current vs. Forward Current

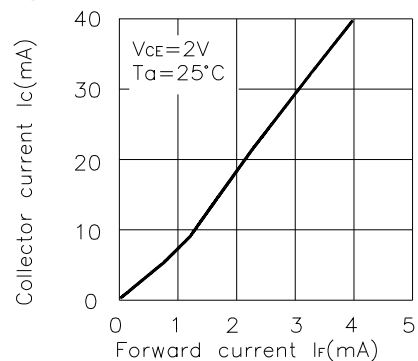


Fig.3 Collector Current vs. Collector-emitter Voltage

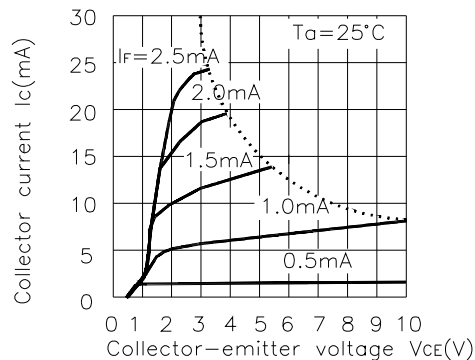


Fig.4 Collector Current vs. Ambient Temperature

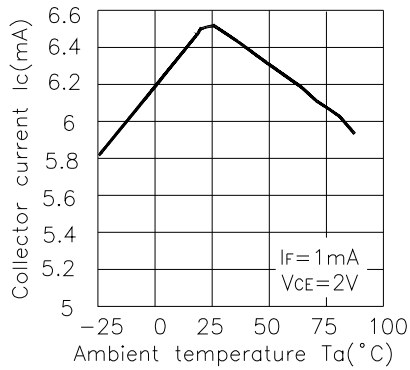


Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

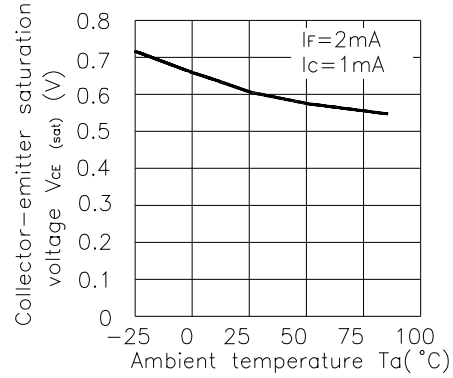


Fig.6 Relative Collector Current vs. Shield Distance(1)

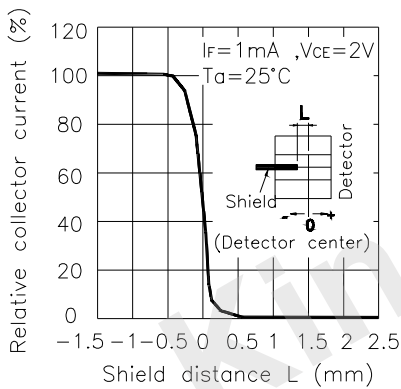


Fig.7 Relative Collector Current vs. Shield Distance(2)

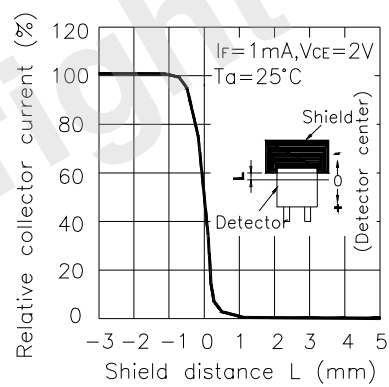
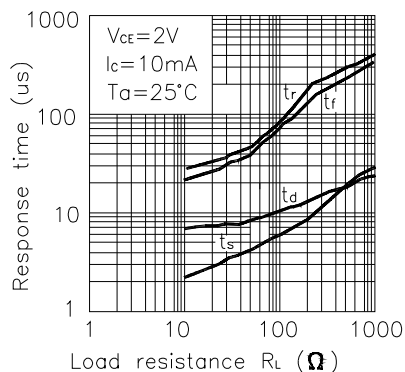
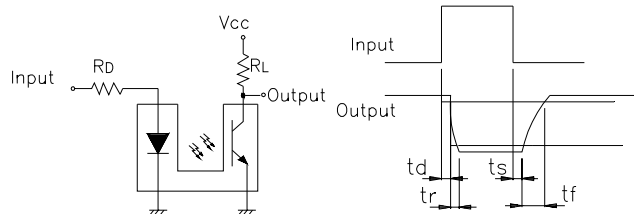


Fig.8 Response Time vs. Load Resistance

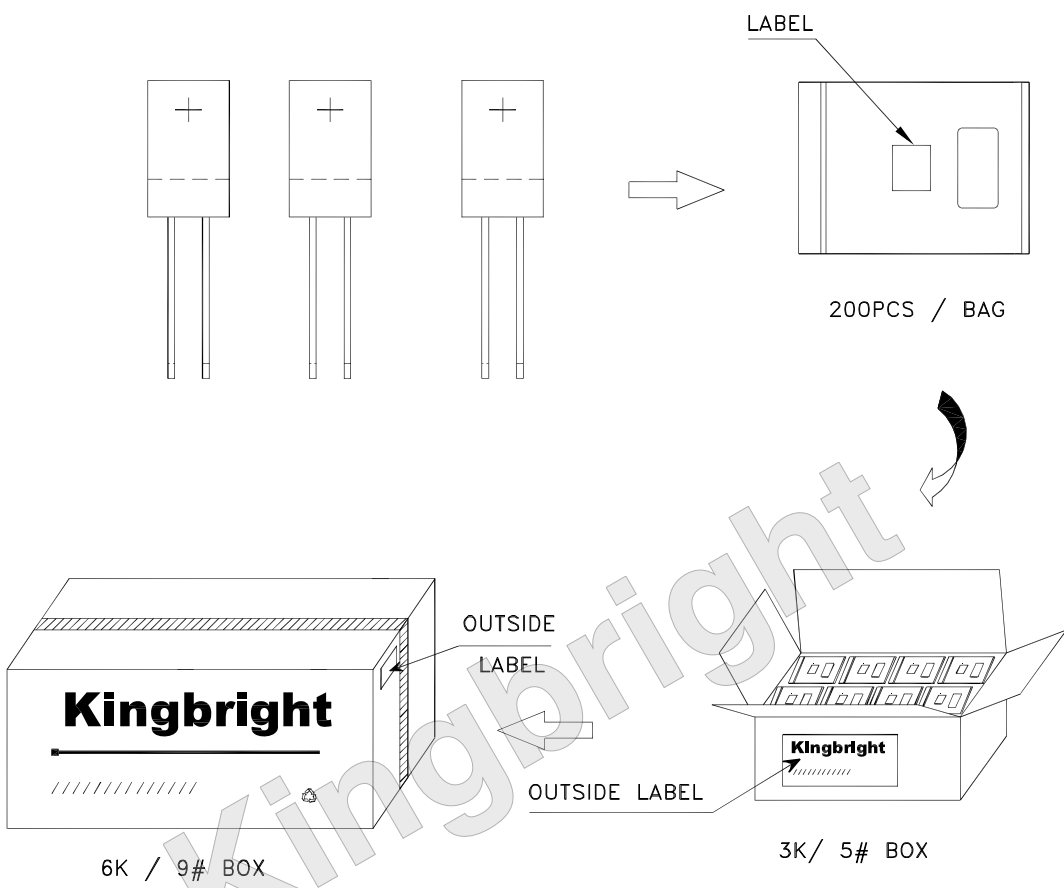


Test Circuit for Response Time



PACKING & LABEL SPECIFICATIONS

KTIR0421DS



Kingbright		
P/NO: KTIR0421DS		
QTY: 200 pcs	Q.C.	Q C
S/N: XXXX		XX XX XXXX
CODE: XXX		PASSED
LOT NO:		
		
RoHS Compliant		