

SLOTTED SWITCH

T-41-73

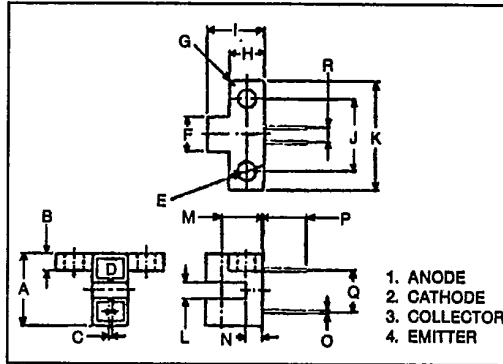
MTSS8050 INFRARED LED+PHOTO TRANSISTOR

APPLICATIONS

- OPTICAL SWITCH
- SHAFT POSITION AND VELOCITY SENSOR

FEATURES

- Both chips face each other across a 0.118 inch air gap.
- Small slit width 0.020 inch.
- Fits standard dual in-line package socket.
- No contact switching, therefore high reliability.
- Plastic case.
- Transistor detector offers faster switching speeds than darlington detectors.

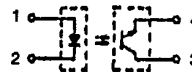


MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
A	Forward Current	I _F	50	mA
	Reverse Voltage	V _R	5	V
B	Collector-Emitter Voltage	V _{CEO}	35	V
	Emitter-Collector Voltage	V _{ECO}	5	V
	Collector Power Dissipation	P _C	75	mW
	Collector Current	I _C	50	mA
Operating Temperature Range		T _{opr}	-25 ~ 85	°C
Storage Temperature Range		T _{stg}	-40 ~ 100	°C

SYMBOL	INCHES	MM
A	0.512	13.0
B	0.118	3.0
C	0.020 ± 0.004	0.5 ± 0.1
D	0.020	0.5
E	0.126	3.2
F	0.244	6.2
G	0.020	0.5
H	0.244	6.2
I	0.394	10.0
J	0.500 ± 0.008	12.7 ± 0.2
K	0.748	19.0
L	0.118 ± 0.004	3.0 ± 0.1
M	0.283 ± 0.012	7.2 ± 0.3
N	0.118	3.0
O	0.018	0.45
P	0.709	18 MIN
Q	0.300	7.62
R	0.100	2.54

PIN CONFIGURATIONS
(TOP VIEW)



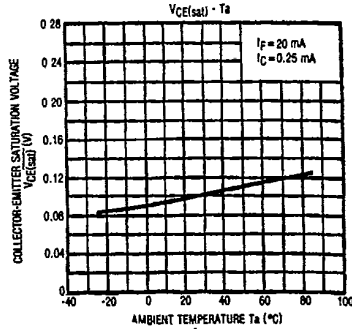
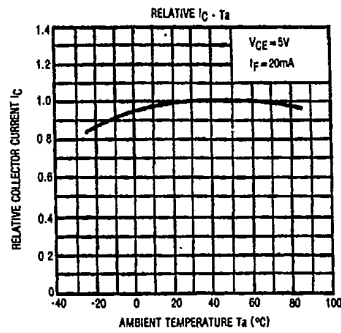
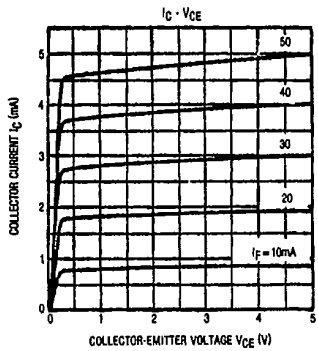
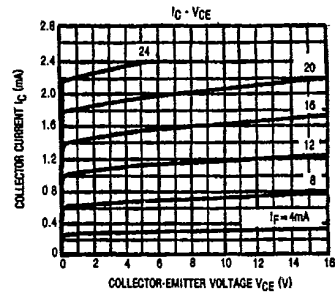
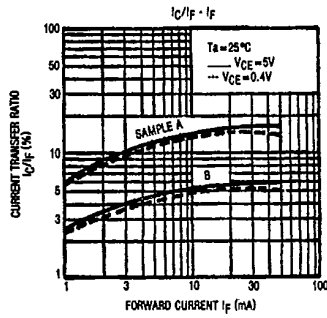
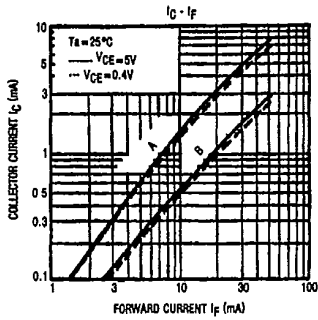
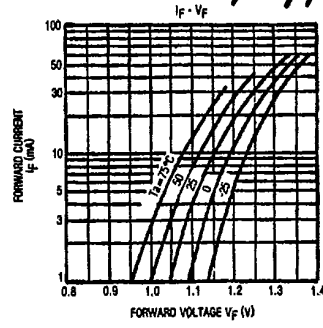
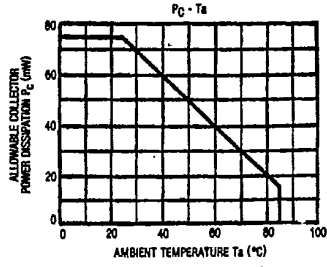
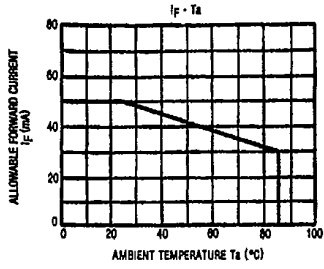
OPTO-ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
A	Forward Voltage	V _F	I _F = 10mA	1.00	1.15	1.30	V
	Reverse Current	I _R	V _R = 5V	—	—	10	μA
	Capacitance	C _T	V = 0, f = 1MHz	—	30	—	pF
B	Dark Current	I _D (I _{CEO})	V _{CE} = 24V, I _F = 0	—	5	100	nA
	Capacitance	C _T	V = 0, f = 1MHz	—	13	—	pF
C	Current Transfer Ratio	I _C /I _F	V _{CE} = 5V, I _F = 20mA	2.5	10	—	%
	Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _F = 20mA, I _C = 25mA	—	0.1	0.4	V
	Rise Time	t _r	V _{CC} = 5V, I _C = 2mA	—	6	—	μs
	Fall Time	t _f	R _L = 100Ω	—	6	—	μs

A - EMITTER B - DETECTOR C - COUPLED

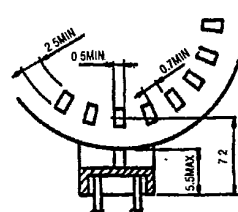
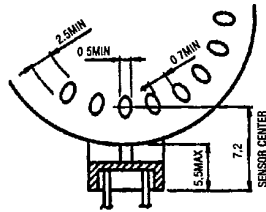
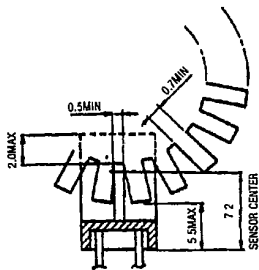
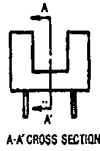
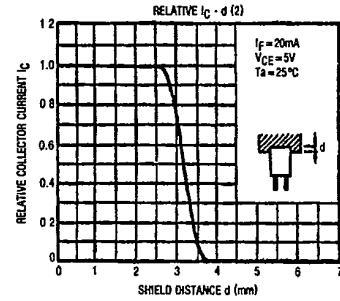
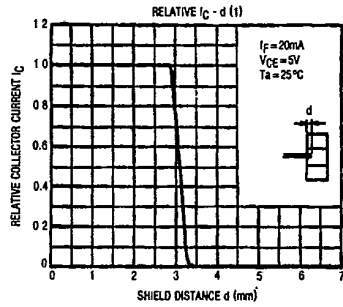
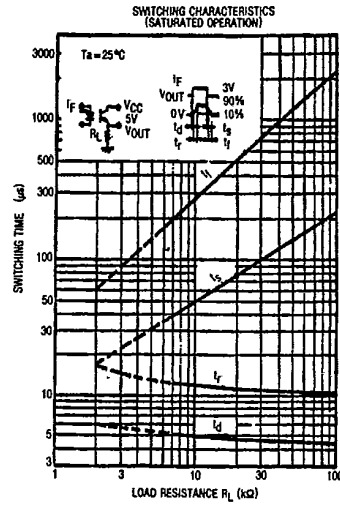
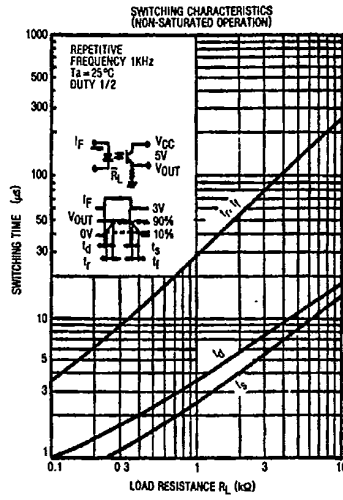
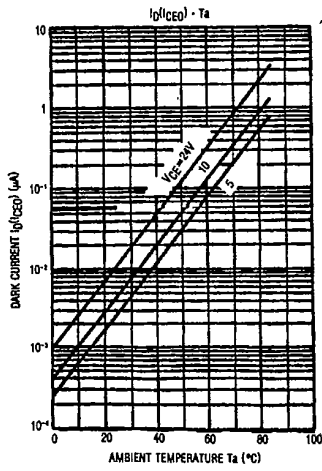
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(units in mm)