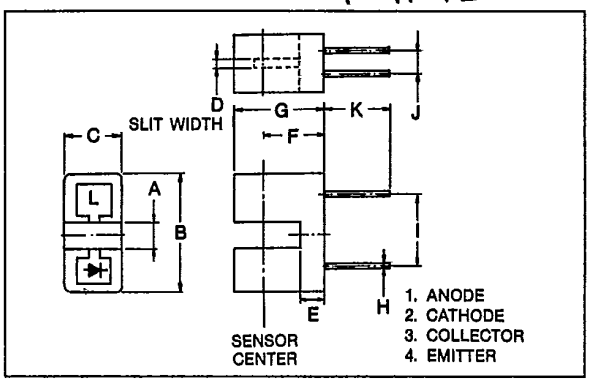
SLOTTED SWITCH

T-41-73

MTSS8520
INFRARED LED+PHOTO DARLINGTON



APPLICATIONS

- OPTICAL SWITCH
- SHAFT POSITION AND VELOCITY SENSOR

FEATURES

- High current transfer ratio: I_C/I_F=30%(Min.)
- Fits standard dual in-line package socket.
- Photo detector is not sensitive for visible light disturbance.

SYMBOL	INCHES	MM
A	0.118	3.0
B	0.512	13.0
C	0.244	6.2
D	0.039 ± 0.004	1.0 ± 0.1
E	0.098	2.5
F	0.270 ± 0.012	6.85 ± 0.3
G	0.394	10.0
H	0.018	0.45
I	0.300	7.62
J	0.100	2.54
K	0.709 MIN	18.0 MIN
L	0.039	1.0

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}	30	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

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 Between Terminals	C_T	V=0, f=1MHz	—	30	—	pF
B	Dark Current	$I_D(I_{CEO})$	V_{CE}=16V, I_F=0	—	30	250	nA
	Capacitance Between Terminals	C_T	V=0, f=1MHz	—	7	—	pF
C	Current Transfer Ratio	I_C/I_F	V_{CE}=2V, I_F=10mA	30	200	—	%
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_F=10mA, I_C=1.5mA	—	0.85	1.2	V
	Rise Time	t_r	V_{CC}=5V, I_C=10mA	—	200	—	μs
	Fall Time	t_f	R_L=100Ω	—	150	—	μs

A - LED B - DETECTOR C - COUPLED

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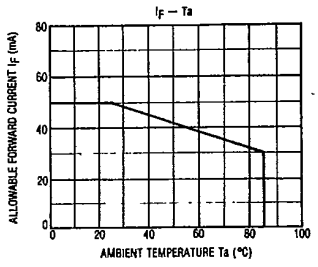

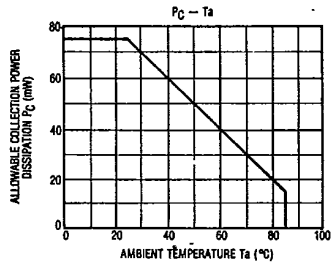

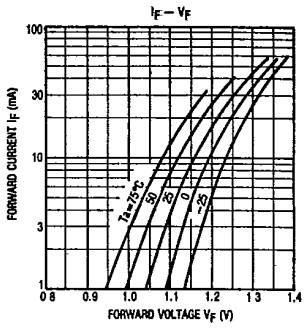

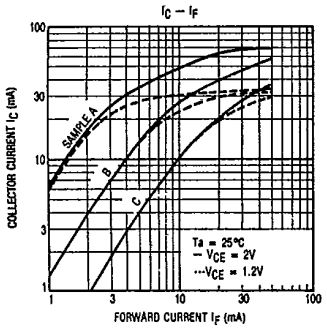

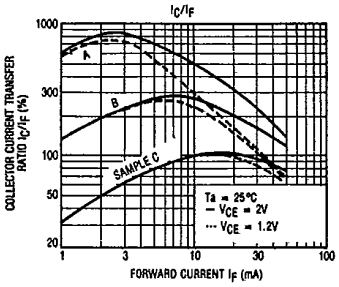

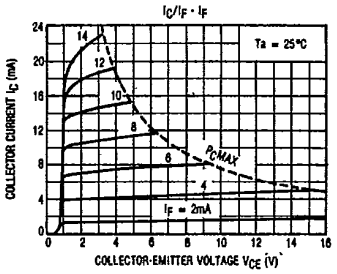

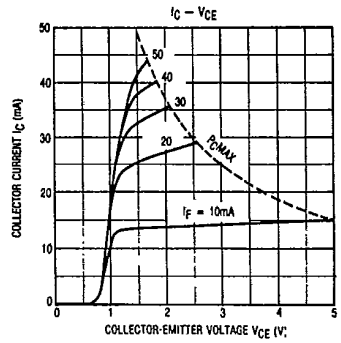

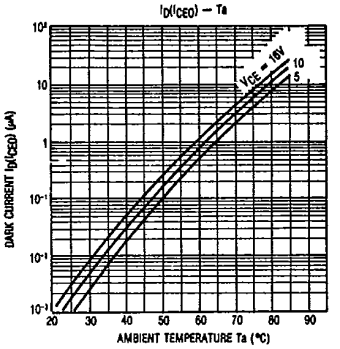

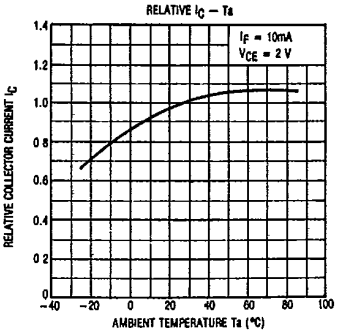

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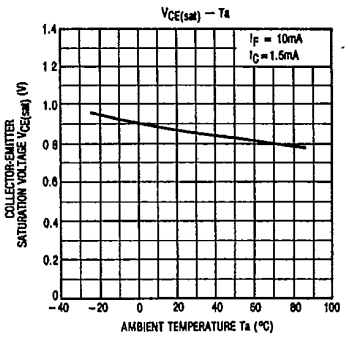

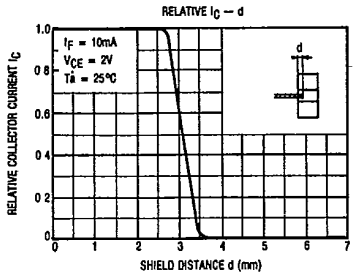

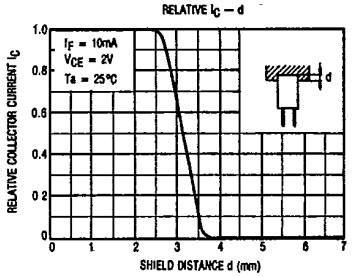

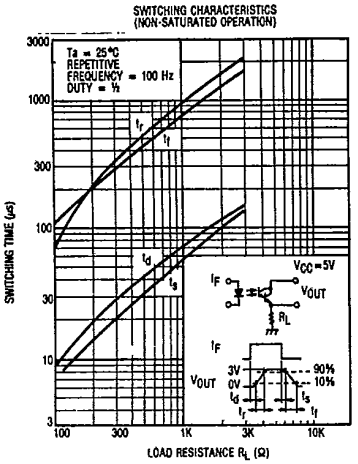

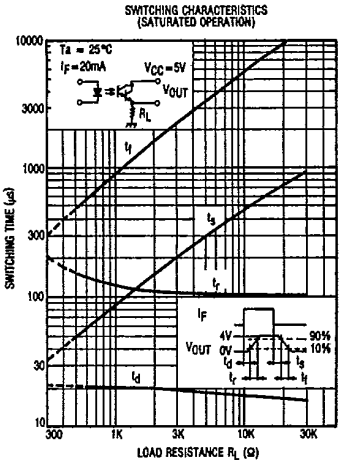

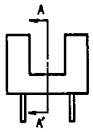

A-A' CROSS SECTION