

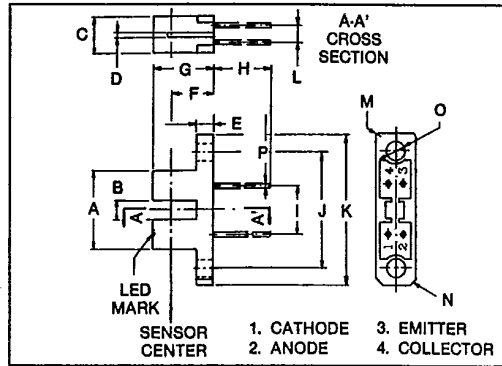
# SLOTTED SWITCH

T-41-73

## MTSS8000A INFRARED LED+PHOTO TRANSISTOR

### FEATURES

- Both chips face each other across a 0.118 inch air gap.
- Small slit width 0.039 inch.
- Either side mounting flange.
- Fits standard dual in-line package socket.
- No contact switching, therefore high reliability.
- Plastic case.
- Transistor detector offers faster switching speeds than darlington detectors.



SYMBOL	INCHES	MM
A	0.512	13.0
B	0.118	3.0
C	0.244	6.2
D	0.039	1.0
E	0.098	2.5
F	0.269	6.85
G	0.393	10.0
H	0.709	18.0
I	0.300	7.62
J	0.748	19.0
K	0.984	25.0
L	0.100	2.54
M	0.079	2.0
N	0.039	1.0
O	0.130	3.3
P	0.018	0.45

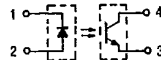
### MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
A Forward Current	$I_F$	50	mA
A Reverse Voltage	$V_R$	5	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector Voltage	$V_{ECO}$	5	V
B 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)

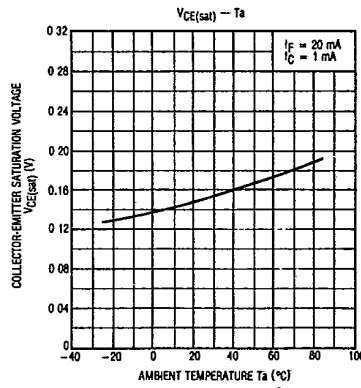
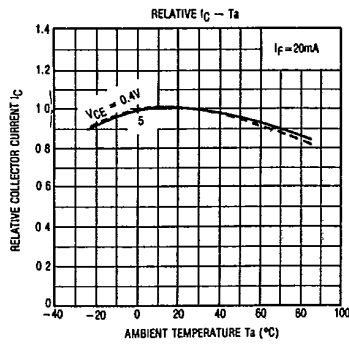
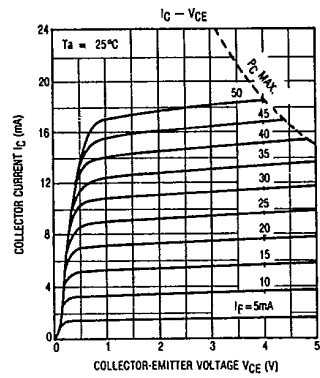
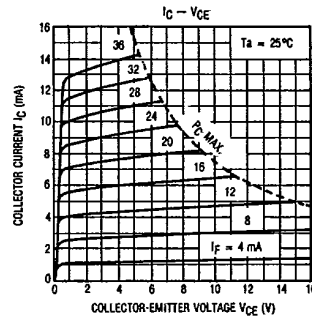
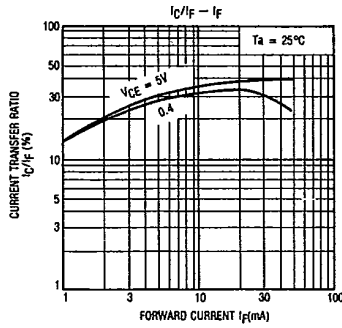
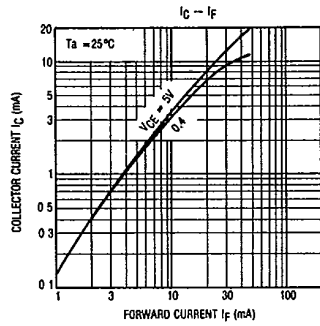
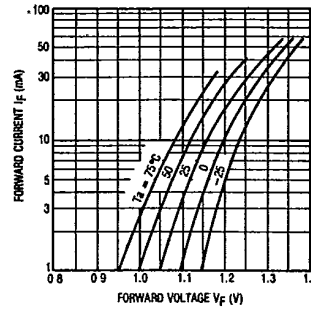
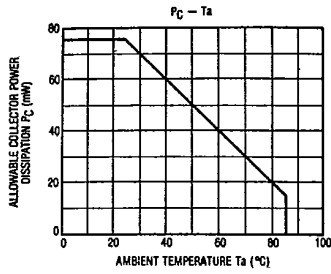
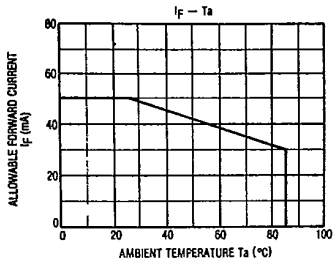
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
A Forward Voltage	$V_F$	$I_F = 10mA$	1.00	1.15	1.30	V
A Reverse Current	$I_R$	$V_R = 5V$	—	—	10	$\mu A$
Capacitance	$C_T$	$V = 0, f = 1MHz$	—	30	—	pF
B Dark Current	$I_D(I_{CEO})$	$V_{CE} = 24V, I_F = 0$	—	5	100	nA
B Capacitance	$C_T$	$V = 0, f = 1MHz$	—	13	—	pF
Current Transfer Ratio	$I_C/I_F$	$V_{CE} = 5V, I_F = 20mA$	10	40	—	%
C Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_F = 20mA, I_C = 1mA$	—	0.15	0.4	V
Rise Time	$t_r$	$V_{CC} = 5V, I_C = 2mA$	—	6	—	$\mu s$
Fall Time	$t_f$	$R_L = 100\Omega$	—	6	—	$\mu s$

A - LED B - DETECTOR C - COUPLED



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$I_F - V_F$  T-41-73



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