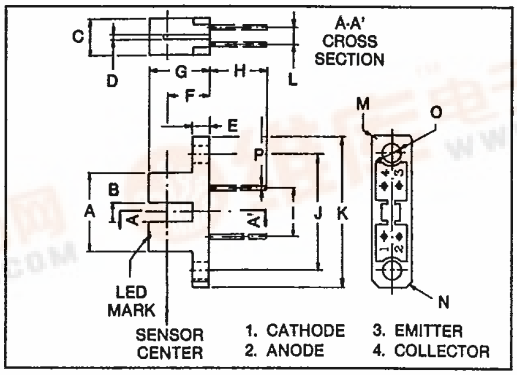
SLOTTED SWITCH

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

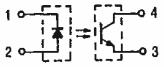
MAXIMUM RATINGS (Ta = 25°C)

	CHARACTERISTIC	SYMBOL	RATING	UNIT
A	Forward Current	I_F	50	mA
	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	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	10	40	—	%
	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	—	μs
	Fall Time	t_f	R_L=100Ω	—	6	—	μs

A - LED B - DETECTOR C - COUPLED



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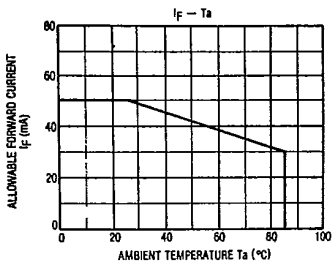
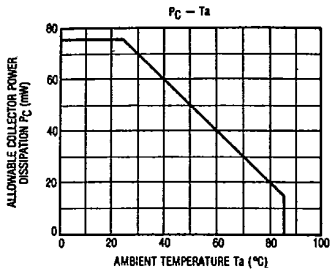
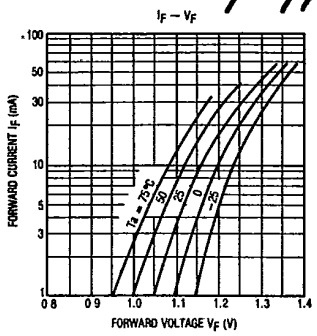
$I_F - Ta$



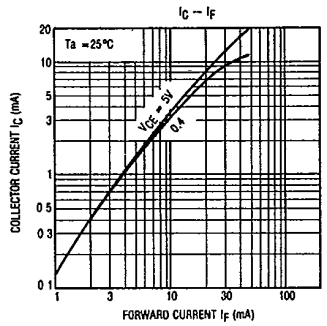
$P_C - Ta$



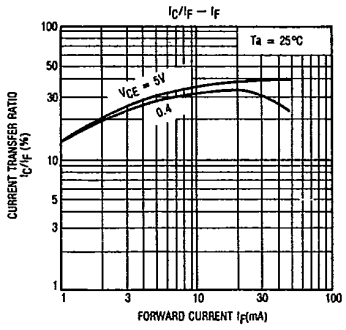
$I_F - V_F$



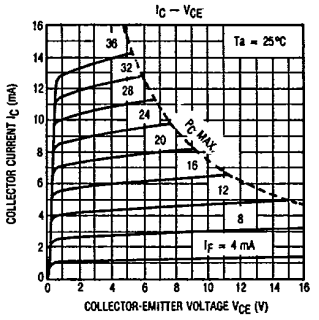
$I_C - I_F$



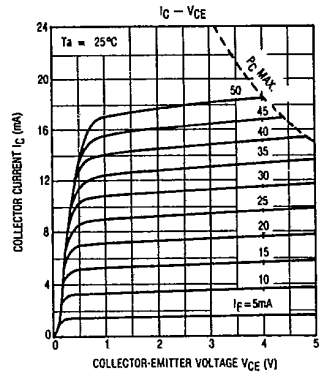
$I_C/I_F - I_F$



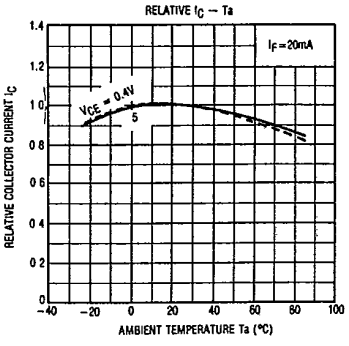
$I_C - V_{CE}$



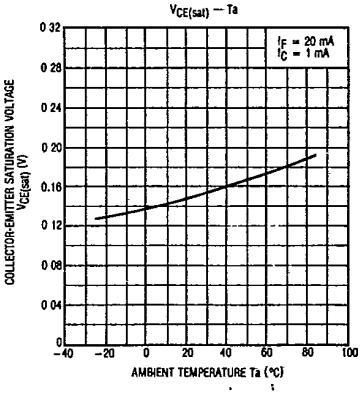
$I_C - V_{CE}$



RELATIVE $I_C - Ta$



$V_{CE(sat)} - Ta$



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