

# SLOTTED SWITCH

T.41-73

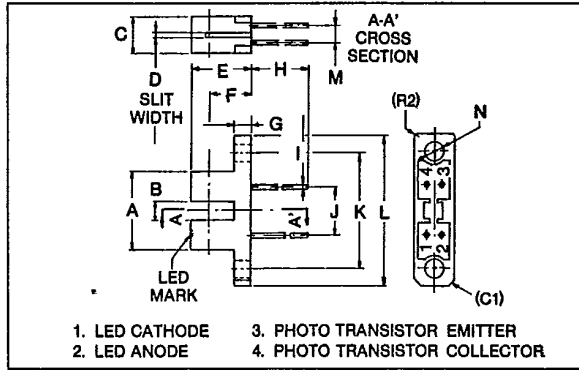
## MTSS5070A INFRARED LED+PHOTO DARLINGTON

### APPLICATIONS

- OPTICAL SWITCH
- SHAFT POSITION AND VELOCITY SENSOR

### FEATURES

- High current transfer ratio:  $I_C/I_F=30\%$  (Min.)



### MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	$I_F$	50	mA
Reverse Voltage	$V_R$	5	V
Forward Current Derating	$\Delta I_F/^\circ C$	-0.33	mA/°C
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector Voltage	$V_{ECO}$	5	V
Collector Power Dissipation	$P_C$	75	mW
Collector Power Dissipation Derating	$\Delta P_C/^\circ C$	-1.0	mW/°C
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	0.244	6.2
D	0.039	1.0
E	0.394	10.0
F	$0.270 \pm 0.012$	$6.85 \pm 0.3$
G	0.098	2.5
H	0.709 MIN	18 MIN
I	0.018	0.45
J	0.300	7.62
K	0.748	19.0
L	0.984	25.0
M	0.100	2.54
N	0.118	3.0

### OPTO-ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F=10mA$	1.00	1.15	1.30	V
Reverse Current	$I_R$	$V_R=5V$	—	—	10	$\mu A$
Capacitance	$C_T$	$V=0, f=1MHz$	—	30	—	pF
Capacitance	$C_T$	$V=0, f=1MHz$	—	6	—	pF
Dark Current	$I_D(I_{CEO})$	$V_{CE}=16V, I_F=0$	—	30	250	nA
Current Transfer Ratio	$I_C/I_F$	$V_{CE}=2V, I_F=10mA$	30	—	—	%

A - LED B - DETECTOR C - COUPLED

