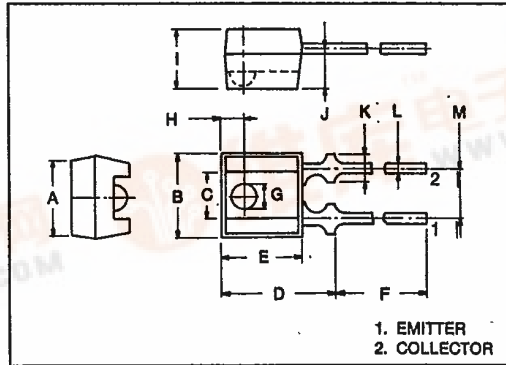


PHOTO TRANSISTOR

T-41-61

MTD6180
SILICON NPN
EPITAXIAL PLANAR
SILICON PHOTO TRANSISTOR
FOR PHOTO SENSOR



APPLICATIONS

- OPTICAL SWITCH
- INTERRUPTER
- TAPE, CARD READERS

FEATURES

- Spectrally and mechanically matched with IR emitter MTE1070A.
- Saturation level directly compatible with most TTL.
- Suitable for photo interrupter assembly.
- Housing material is visible light cut one.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Collector Voltage	V _{ECO}	5	V
Collector Current	I _{C(L)}	50	mA
Collector Power Dissipation	P _C	75	mW
Collector Power Dissipation Derating	ΔP _C /°C	-1.0	mW/°C
Operating Temperature Range	T _{opr}	-25~85	°C
Storage Temperature Range	T _{stg}	-40~100	°C

SYMBOL	INCHES	MM
A	0.157	4.0
B	0.173 ⁺⁰ / _{-0.010}	4.4 ⁺⁰ / _{-0.25}
C	0.094 ± 0.012	2.4 ± 0.3
D	0.228	5.75
E	0.159	4.05
F	0.945 ± 0.039	24 ± 1
G	0.059	1.5
H	0.049	1.25
I	0.118 ⁺⁰ / _{-0.010}	3.0 ⁺⁰ / _{-0.25}
J	0.079	2.0
K	0.051	1.3
L	0.018	0.45
M	0.100 ± 0.012	2.54 ± 0.3

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Dark Current	I _{D(CEO)}	V _{CE} = 24V, E = 0	—	5	100	nA
Light Current	I _L	V _{CE} = 3V, E = 0.1mW/cm ² (Note)	20	70	—	μA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 10μA, E = 0.1mW/cm ² (Note)	—	0.15	0.4	V
Switching Time	Rise Time	V _{CC} = 5V, I _C = 1mA, R _L = 100Ω	—	6	—	μs
	Fall Time		—	6	—	μs

Note: Color temperature = 2870°K Standard Tungsten Lamp.

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