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MEL 11
MEL 12

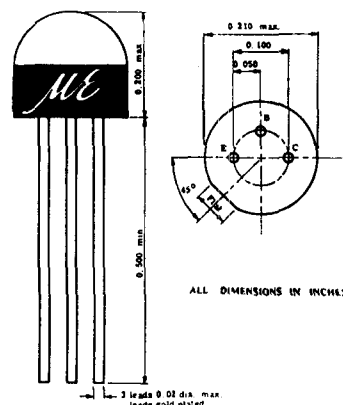
NPN SILICON
PHOTO-DARLINGTON
TRANSISTOR

GENERAL DESCRIPTION :

The MEL 11, MEL 12 are three terminal NPN silicon planar photo-darlington transistors. It features very high light current and low dark current.

MECHANICAL OUTLINE

TO-106



ABSOLUTE MAXIMUM RATINGS :

		MEL 11	MEL 12
Continuous Power Dissipation	P_d	200mW	
Collector Current	I_C	150mA	
Collector-Emitter Voltage	V_{CEO}	30V	40V
Collector-Base Voltage	V_{CBO}	40V	60V
Operating Temperature Range	T_j	-55° C to +85° C	
Storage Temperature Range	T_{stg}	-55° C to +100° C	

ELECTRICAL CHARACTERISTICS AT 25° C

CHARACTERISTICS	SYMBOL	MEL 11			MEL 12			UNIT	CONDITION
		Min.	Typ.	Max.	Min.	Typ.	Max.		
Collector-Emitter Breakdown Voltage	BV_{CEO}	30			40			V	$I_C=10\text{mA}$ $H=0$
Collector-Base Breakdown Voltage	BV_{CBO}	40			60			V	$I_C=0.1\text{mA}$ $H=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	10			10			V	$I_E=0.1\text{mA}$ $H=0$
Light Current	I_L	0.5	2		1	3		mA	$V_{CE}=5\text{V}$ $H=2\text{mW/cm}^2$
Dark Current	I_D			100			100	nA	$V_{CE}=5\text{V}$ $I_B=0$
Delay Time	t_d		60			60		μsec	$V_{CE}=10\text{V}$ $I_L=1\text{mA}$ $R=1\text{K}\Omega$
Rise Time	t_r		100			100		μsec	$V_{CE}=10\text{V}$ $I_L=1\text{mA}$ $R=1\text{K}\Omega$
Storage Time	t_s		0.5			0.5		μsec	$V_{CE}=10\text{V}$ $I_L=1\text{mA}$ $R=1\text{K}\Omega$
Fall Time	t_f		75			75		μsec	$V_{CE}=10\text{V}$ $I_L=1\text{mA}$ $R=1\text{K}\Omega$