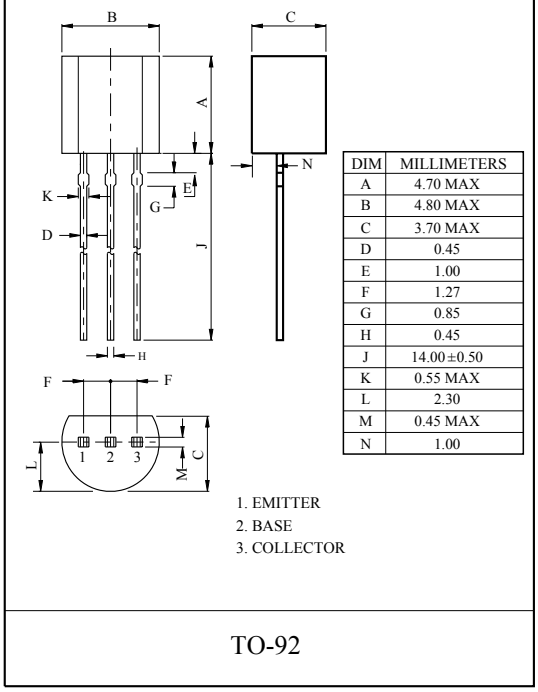
MPSA13/14

EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATIONS.
DARLINGTON TRANSISTOR.



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

TO-92

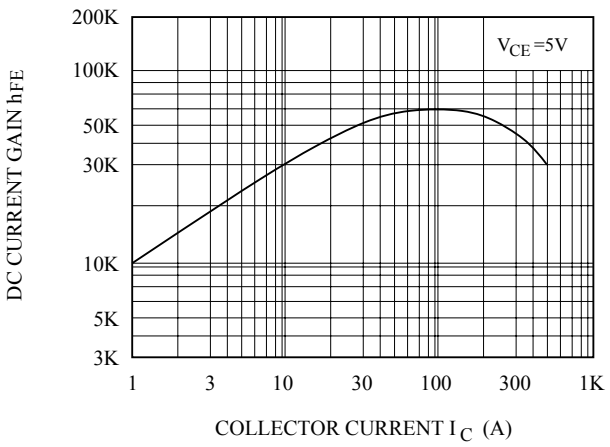
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CES}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Current	I_C	500	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55～150	℃

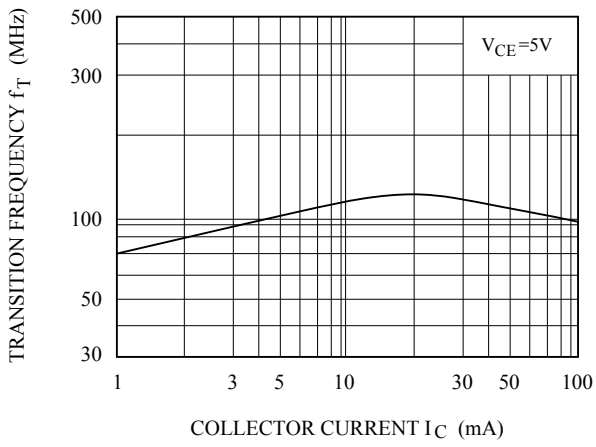
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage		V_{CES}	I_C=0.1mA	30	-	-	V
Emitter Cut-off Current		I_{CBO}	V_{CB}=30V	-	-	100	nA
Emitter Cut-off Current		I_{EBO}	V_{EB}=10V	-	-	100	nA
DC Current Gain	MPSA13	h_{FE}	I_C=10mA, V_{CE}=5V	5,000	-	-	-
	MPSA14			10,000	-	-	
	MPSA13		I_C=100mA, V_{CE}=5V	10,000	-	-	
	MPSA14			20,000	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=100mA, I_B=0.1mA	-	-	1.5	V
Base-Emitter Voltage		V_{BE}	I_C=100mA, V_{CE}=5V	-	-	2.0	V
Current Gain Bandwith Product		f_T	I_C=10mA, f=100MHz, V_{CE}=5V	125	-	-	MHz

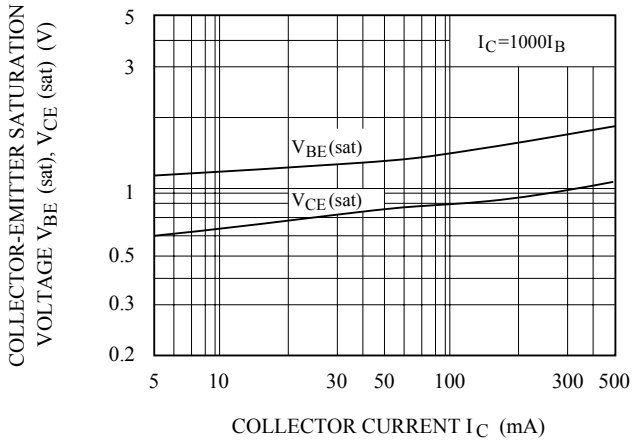
h_{FE} - I_C



f_T - I_C



V_{BE} (sat), V_{CE} (sat) - I_C



I_C - V_{BE}