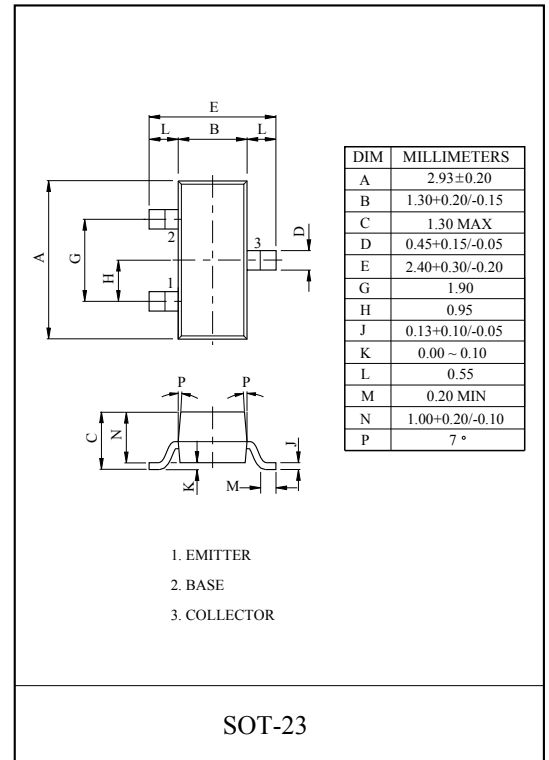


GENERAL PURPOSE APPLICATION.  
DARLINGTON TRANSISTOR.

#### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	30	V
Collector-Emitter Voltage	V <sub>CES</sub>	30	V
Emitter-Base Voltage	V <sub>EBO</sub>	10	V
Collector Current	I <sub>C</sub>	500	mA
Collector Power Dissipation	P <sub>C</sub> *	350	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 ~ 150	°C

\* : Package Mounted On 99.5% Alumina 10×8×0.6mm.



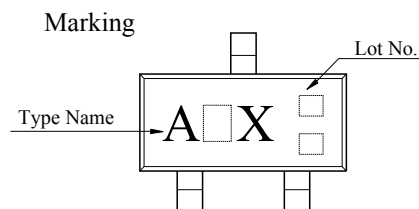
#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage	V <sub>CES</sub>	I <sub>C</sub> =0.1mA	30	-	-	V
Emitter Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V	-	-	100	nA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =10V	-	-	100	nA
DC Current Gain	MMBTA13	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V	5,000	-	-	-
	MMBTA14		10,000	-	-	
	MMBTA13	I <sub>C</sub> =100mA, V <sub>CE</sub> =5V	10,000	-	-	
	MMBTA14		20,000	-	-	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =0.1mA	-	-	1.5	V
Base-Emitter Voltage	V <sub>BE</sub>	I <sub>C</sub> =100mA, V <sub>CE</sub> =5V	-	-	2.0	V
Current Gain Bandwidth Product	f <sub>T</sub>	I <sub>C</sub> =10mA, f=100MHz, V <sub>CE</sub> =5V	125	-	-	MHz

\*Pulse Test : Pulse Width ≤ 300μS, Duty Cycle ≤ 2.0%

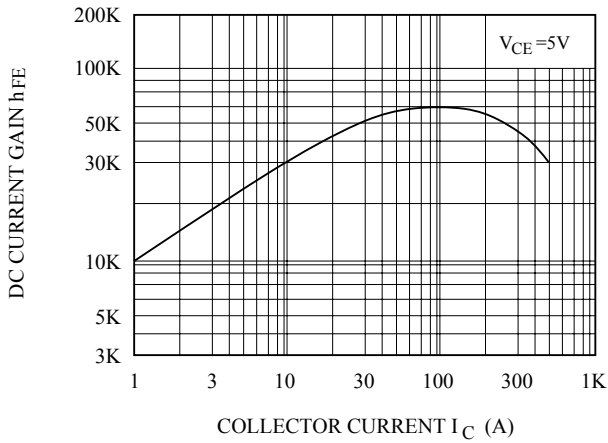
#### MARK SPEC

TYPE	MMBTA13	MMBTA14
MARK	AIX	AHX

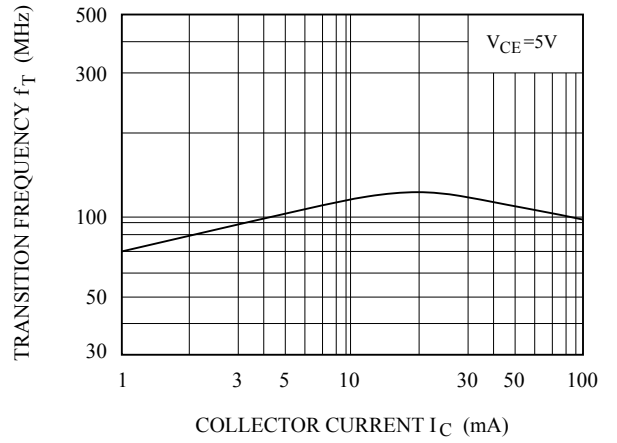


# MMBTA13/14

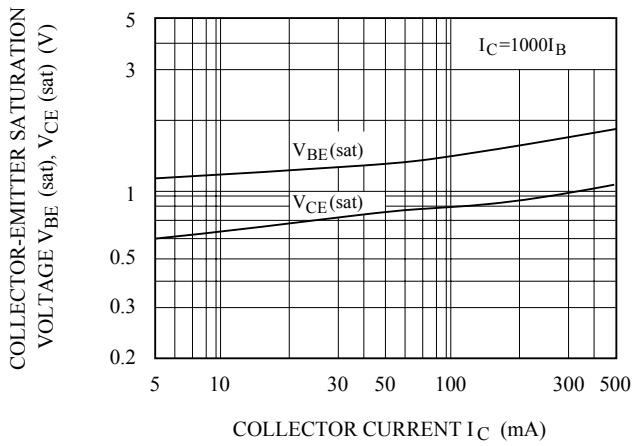
$h_{FE} - I_C$



$f_T - I_C$



$V_{BE}(\text{sat}), V_{CE}(\text{sat}) - I_C$



$I_C - V_{BE}$

