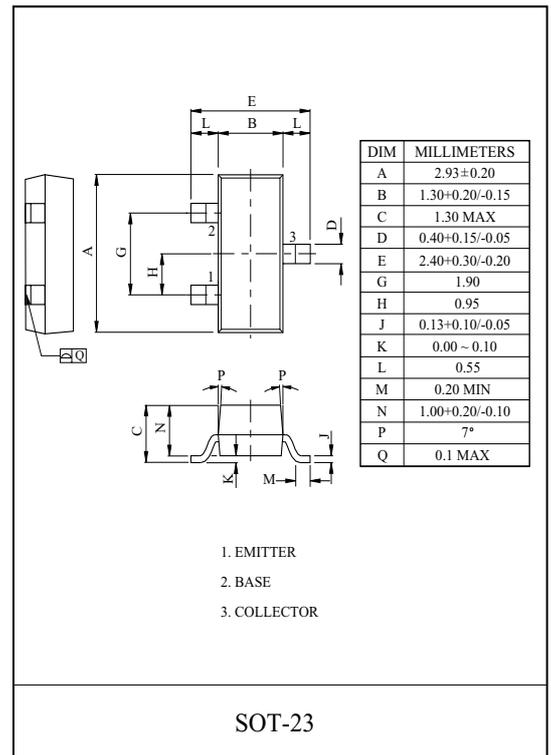


GENERAL PURPOSE APPLICATION.  
DARLINGTON TRANSISTOR.

#### MAXIMUM RATING (Ta=25 °C)

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	$P_C^*$	350	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

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



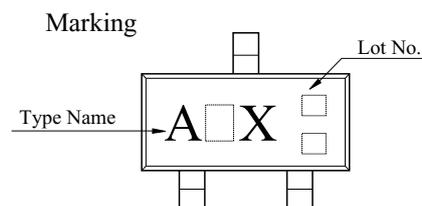
#### ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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	MMBTA13	$I_C=10mA, V_{CE}=5V$	5,000	-	-	-
	MMBTA14		10,000	-	-	
	MMBTA13	$I_C=100mA, V_{CE}=5V$	10,000	-	-	
	MMBTA14		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 Bandwidth Product	$f_T$	$I_C=10mA, f=100MHz, V_{CE}=5V$	125	-	-	MHz

\*Pulse Test : Pulse Width 300  $\mu$ s, Duty Cycle 2.0%

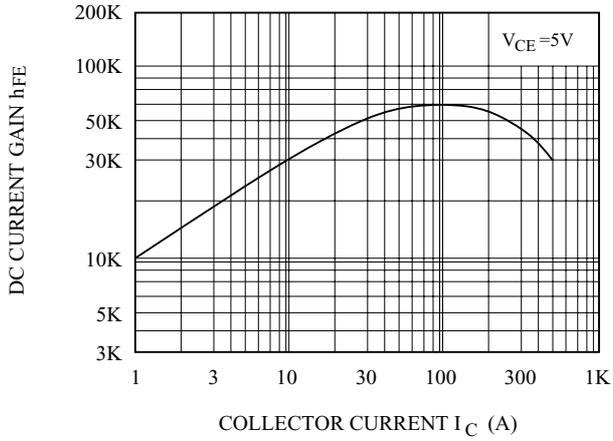
#### MARK SPEC

TYPE	MMBTA13	MMBTA14
MARK	AIX	AHX

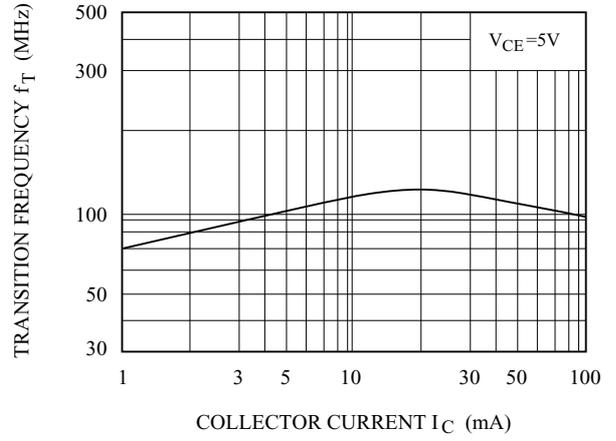


# MMBTA13/14

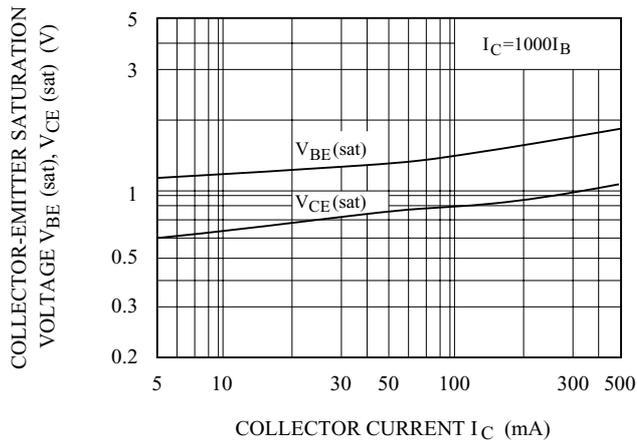
$h_{FE} - I_C$



$f_T - I_C$



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



$I_C - V_{BE}$

