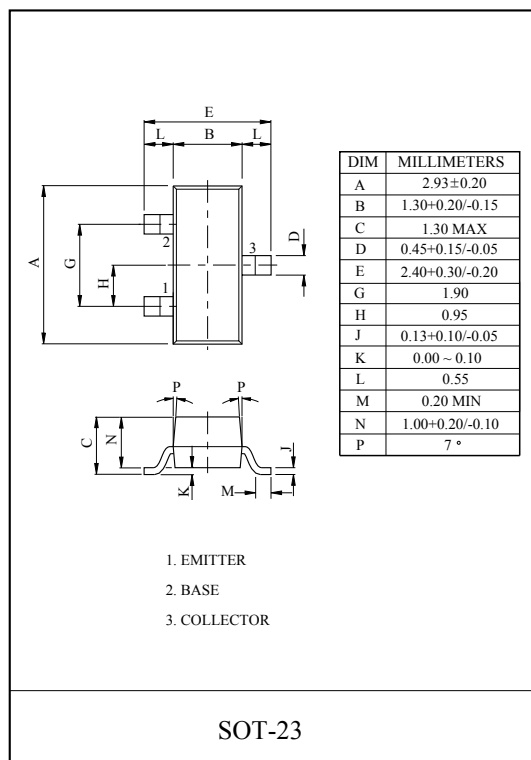


GENERAL PURPOSE APPLICATION.
DARLINGTON TRANSISTOR.

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^* | 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.



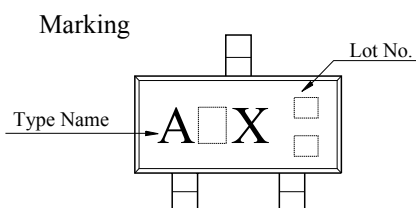
ELECTRICAL CHARACTERISTICS (Ta=25℃)

| 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 $\leq 300\mu S$, Duty Cycle $\leq 2.0\%$

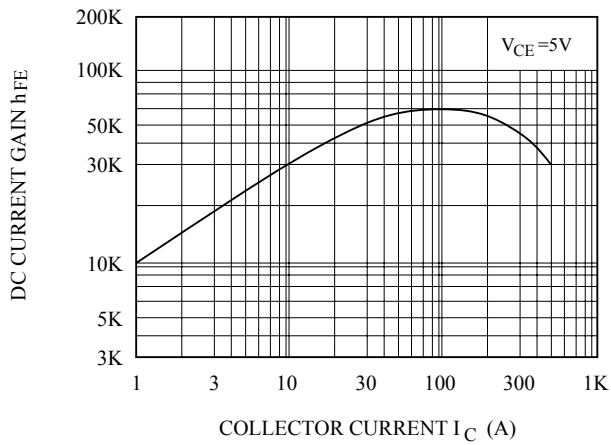
MARK SPEC

| | | |
|------|---------|---------|
| TYPE | MMBTA13 | MMBTA14 |
| MARK | AIX | AHX |

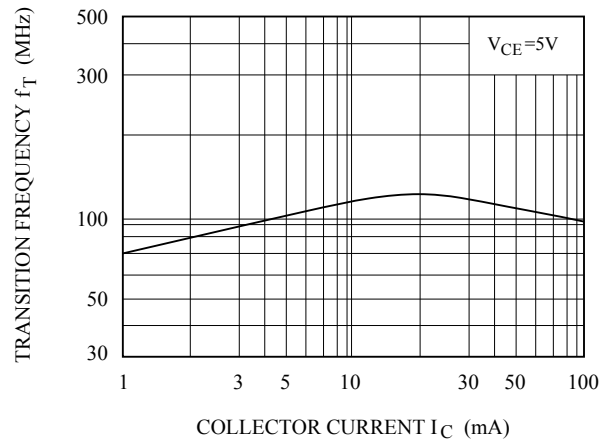


MMBTA13/14

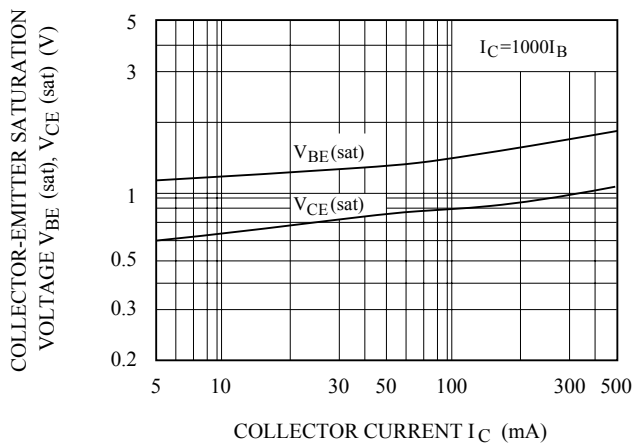
$h_{FE} - I_C$



$f_T - I_C$



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



$I_C - V_{BE}$

