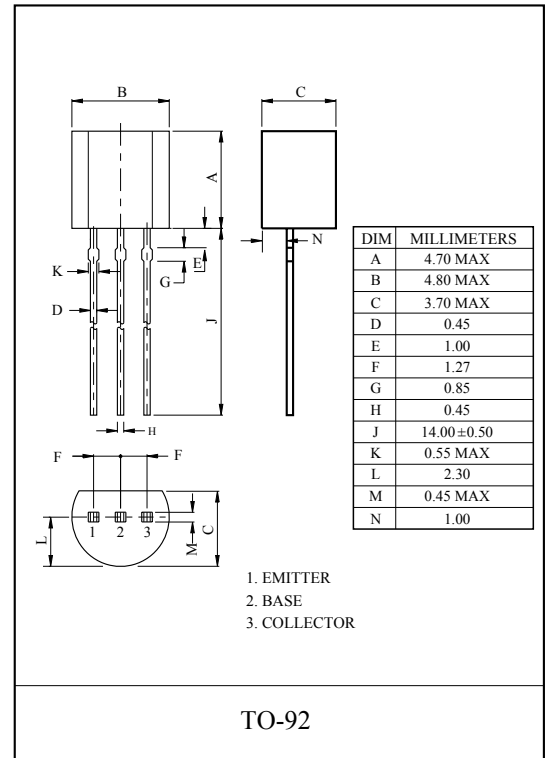


GENERAL PURPOSE APPLICATIONS.
DARLINGTON TRANSISTOR.

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 | 625 | mW |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -55 ~ 150 | °C |

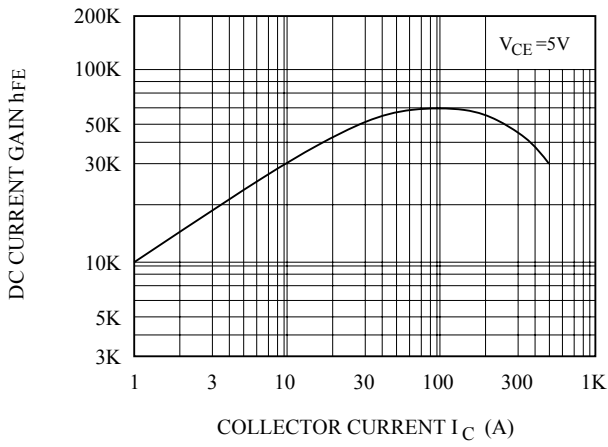


ELECTRICAL CHARACTERISTICS (Ta=25°C)

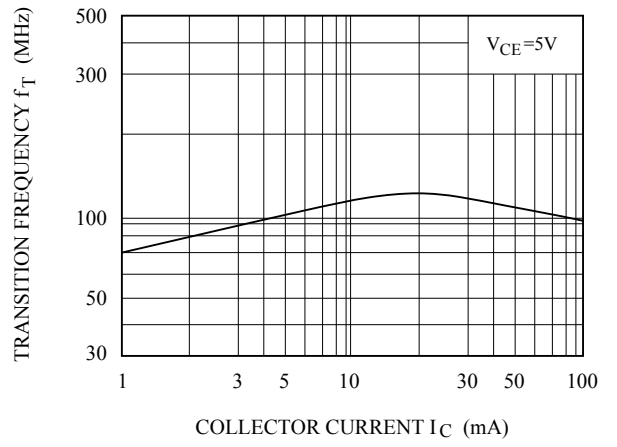
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|----------------------|-----------------------------------------------------|--------|------|------|------|
| Collector-Emitter Breakdown Voltage | V _{CES} | I _C =0.1mA | 30 | - | - | V |
| 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 | MPSA13 | 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 Bandwidth Product | f _T | I _C =10mA, f=100MHz, V _{CE} =5V | 125 | - | - | MHz |

MPSA13/14

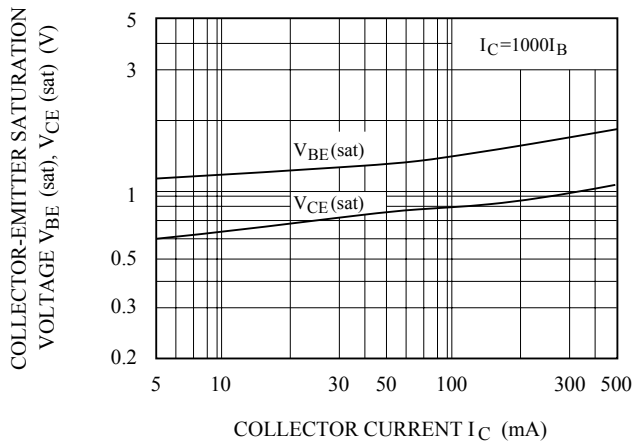
$h_{FE} - I_C$



$f_T - I_C$



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



$I_C - V_{BE}$

