FORM 98-7362.2

INTERNATIONAL BUSINESS MACHINES CORPORATION ENGINEERING SPECIFICATIONS

No. 895470

IBM NPN Transistor Type 58 NAME_

No. of SHEETS 5 SHEET 1

WHERE USED.

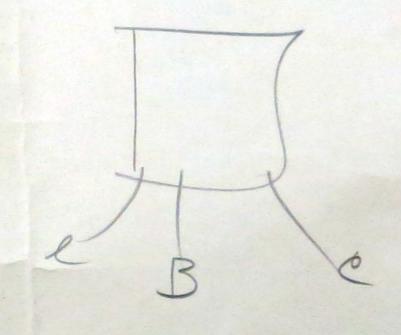
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REFERENCE Fig. Drawing

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INTERNATIONAL BUSINESS MACHINES CORPORATION ENGINEERING SPECIFICATIONS

No. 895470

No. of Sheets Sheet 2

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1.0 Description

This specification covers a NPN transistor.

2.0 Capping

Cap should be secured to transistor in such a manner as to obtain hermetic sealing.

- 3.00 Electrical Testing
 - 3.01 Unless otherwise stated electrical testing should be performed at 25+3 degrees centigrade.

 Temperature tolerance to be + 3 °C.
 - 3.02 Instrument tolerances on voltages and currents will be + 2 per cent. Circuit components such as resistors and capacitors will be within 2 percent of rated values unless otherwise specified.
 - 3.03 Reasonable precautions will be observed to insure that the parameter being measured has stabilized before readings are taken.
 - The magnitude of the collector to base voltage which causes collector to emitter punch through should be 15.0 volts minimum and should be positive. The magnitude of this voltage is determined as shown below and is defined as the intersection of the sloped line with the emitter voltage equals zero axis.

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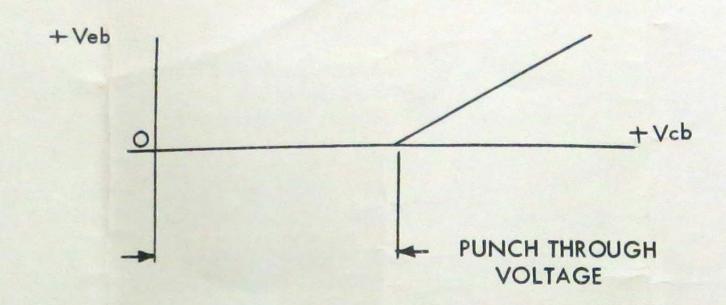
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REFERENCE Fig. Drawing



Impedance of the emitter test probe will be 1.0 megohm minimum.

- The collector cutoff current should be positive and its magnitude should be less than or equal to 50 microamperes when measured at a junction temperature of 55 degrees centigrade with the emitter open circuited and the collector to base voltage set at +5.0 volts.
- 3.07 The emitter cutoff current should be positive and its magnitude should be less than or equal to 50 microamperes when measured at a junction temperature of 55 degrees centigrade with the collector open circuited and the emitter to base voltage set at ♦5.0 volts.

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REFERENCE Fig. Drawing

- 3.08 The collector should be positive and its magnitude should be less than or equal to 175 microamperes when measured at a junction temperature of 55 degrees centigrade with the emitter open circuited and the collector to base voltage set at + 20.0 volts.
- The emitter current should be positive and its magnitude should be less than or equal to 175 microamperes when measured at a junction temperature of 55 degrees centigrade with the collector open circuited and the emitter to base voltage set at +20.0 volts.
- 3.11 The collector to emitter voltage should be positive and its magnitude should be less than or equal to 0.2 volts when measured with common emitter, the collector current set at +7.5 milliamperes and the base current set at +215 microamperes.

The base to emitter voltage should be positive and its magnitude should be less than or equal to 0.3 volts when measured under the same conditions as stated in the preceding paragraph.

3.13 The alpha cutoff frequency should be equal to or greater than 4.0 megacycles. This frequency is defined as that frequency at which the out put of the circuit shown below has fallen to 70.7 percent of its 350 kilocycle or less value.

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INTERNATIONAL BUSINESS MACHINES CORPORATION ENGINEERING SPECIFICATIONS

No. 895470

O +5 VOLTS

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Drawing

Te=3 ma

. 05 Mf R, ≥3 K_~ IMPEDANCE Z EQUAL TO 100 __

Alternating current impedance of power supply "B" at frequencies applied will be 10 ohms

6.00 Marking 6.01

For identification purposes each transistor will be durably marked with its type and production lot number.

6.02 Collector lead will be positively identified.

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