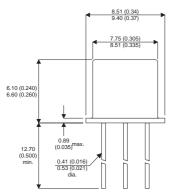
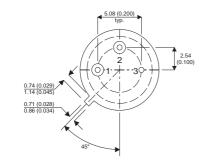




MECHANICAL DATA

Dimensions in mm (inches)





TO39 PACKAGE (TO-205AD)

Underside View

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

MEDIUM POWER SILICON NPN PLANAR TRANSISTOR

FEATURES

•
$$V_{CEO} = 40V$$

$$\bullet I_C = 0.7A$$

•
$$P_{tot} = 5W$$

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

| V_{CBO} | Collector – Base Voltage | 60V | | | |
|---------------------|---|--------------|--|--|--|
| V_{CEO} | Collector – Emitter Voltage | 40V | | | |
| V_{CER} | Collector – Emitter Sustaining Voltage | 50V | | | |
| V_{CEX} | Collector - Emiiter Voltage | 60V | | | |
| V_{EBO} | Emitter-Base Voltage | 5V | | | |
| I _C | Collector Current | 0.7A | | | |
| P_{TOT} | Power Dissipation T _{amb} = 25°C | 1W | | | |
| | T _{case} = 25°C | 5W | | | |
| T _i | Junction Temperature | 200°C | | | |
| T _{stg} | Storage Temperature | −65 to 200°C | | | |
| R _{th(jc)} | Thermal Resistance Junction to Case | 35°C / W | | | |
| R _{th(ja)} | Thermal Resistance Junction to Ambient | 175°C / W | | | |

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ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

| Parameter | | Test Conditions | | Min. | Тур. | Max. | Unit |
|------------------------|--|------------------------|-----------------------|------|------|------|-------|
| V _{CEO(SUS)} | Collector – Emitter Voltage | I _C = 100μA | I _B = 0 | 40 | | | |
| V _{CER(SUS)*} | Collector – Emitter Voltage | $R_{BE} = 10\Omega$ | $I_C = 10mA$ | 50 | | | |
| V _{(BR)CBO*} | Collector – Base Breakdown Voltage | $I_C = 0.1 \text{mA}$ | I _E = 0 | 60 | | | |
| V _{(BR)EBO*} | Emitter – Base Breakdown Voltage | $I_E = 0.1 \text{mA}$ | I _C = 0 | 5 | | | |
| I _{CBO} | Collector – Base Cut-off Current | $V_{CB} = 30V$ | I _E = 0 | | | 0.25 | μΑ |
| I _{EBO} | Emitter - Base Cut-off Current | $V_{EB} = 4V$ | I _C = 0 | | | 0.25 | μΑ |
| V _{CE(sat)*} | Collector – Emitter Saturation Voltage | $I_C = 0.15A$ | $I_B = 0.015A$ | | | 1.4 | V |
| V _{BE(sat)*} | Base – Emitter Saturation Voltage | $I_C = 0.15A$ | $I_B = 0.015A$ | | | 1.7 | \ \ \ |
| h _{21E*} | Static Forward Current Transfer ratio | $I_C = 0.15A$ | V _{CE} = 10V | 50 | | 250 | _ |
| f _T | Transistion Frequency | V _{CE} = 10V | $I_{\rm C} = 0.05 A$ | 100 | | | MHz |
| | | f = 20MHz | | | | | |
| C _{22b} | Output Capacitance | V _{CB} = 10V | f =1MHz | | | 15 | pF |
| C _{11b} | Input Capacitance | V _{EB} = 10V | f =1MHz | | | 80 | Pi |

^{*} Pulsed tp = 300μ S $\delta \le 2$ %

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