

PBSS5120T

|                             | Symbol    | Unit | Conditions             | Value |
|-----------------------------|-----------|------|------------------------|-------|
| Collector-Emitter Voltage   | $V_{CE0}$ | V    | $I_C=-1mA, I_B=0$      | -20   |
| Collector-Base Voltage      | $V_{CBO}$ | V    | $I_C=-100\mu A, I_E=0$ | -20   |
| Emitter-Base Voltage        | $V_{EBO}$ | V    | $I_E=-100\mu A, I_C=0$ | -5    |
| Collector Current           | $I_C$     | A    |                        | -1    |
| Collector Power Dissipation | $P_c$     | mW   |                        | 300   |

# PBSS5120T

## Electrical Characteristics $T_a=25^\circ\text{C}$

| Item                                 | Symbol         | Unit       | Conditions                                               | Min | Max   |
|--------------------------------------|----------------|------------|----------------------------------------------------------|-----|-------|
| Collector-Emitter Voltage            | $V_{CE0}$      | V          | $I_C=-1\text{mA}, I_B=0$                                 | -20 |       |
| Collector-Base Voltage               | $V_{CBO}$      | V          | $I_C=-100\mu\text{A}, I_E=0$                             | -20 |       |
| Emitter-Base Voltage                 | $V_{EBO}$      | V          | $I_E=-100\mu\text{A}, I_C=0$                             | -5  |       |
| Collector-base Cut-off Current       | $I_{CBO}$      | nA         | $V_{CB}=-20\text{V}$                                     |     | -100  |
| Base-emitter Cut-off Current         | $I_{EBO}$      | nA         | $V_{EB}=-4\text{V}$                                      |     | -100  |
| DC Current Gain                      | $h_{FE}$       |            | $I_C=-100\text{mA}, V_{CE}=-2\text{V}$                   | 300 |       |
|                                      |                |            | $I_C=-500\text{mA}, V_{CE}=-2\text{V}$                   | 250 |       |
|                                      |                |            | $I_C=-1\text{A}, V_{CE}=-2\text{V}$                      | 200 |       |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)1}$ | mV         | $I_C=-100\text{mA}, I_B=-1\text{mA}$                     |     | -100  |
|                                      | $V_{CE(sat)2}$ | mV         | $I_C=-500\text{mA}, I_B=-50\text{mA}$                    |     | -125  |
|                                      | $V_{CE(sat)3}$ | mV         | $I_C=-1\text{A}, I_B=-50\text{mA}$                       |     | -250  |
| Equivalent On-Resistance             | $R_{CE(sat)}$  | m $\Omega$ | $I_C=-500\text{mA}, I_B=-50\text{mA}$                    |     | 250   |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$  | V          | $I_C=-1\text{A}, I_B=-100\text{mA}$                      |     | -1.1  |
| Base-Emitter Turn-On Voltage         | $V_{BE(on)}$   | V          | $I_C=-100\text{mA}, V_{CE}=-2\text{V}$                   |     | -0.75 |
| Transition frequency                 | $f_T$          | MHz        | $I_C=-100\text{mA}, V_{CE}=-10\text{V}, f=100\text{MHz}$ | 100 |       |
| Collector Capacitance                | $C_{ob}$       | pF         | $V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$               |     | 28    |

## Characteristics (Typical)



VSOT-23 Package Outline Dimensions

SOT-23 Soldering Footprint

## Disclaimer

The information presented in this document is for reference only.