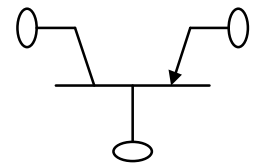


DIE SPECIFICATION

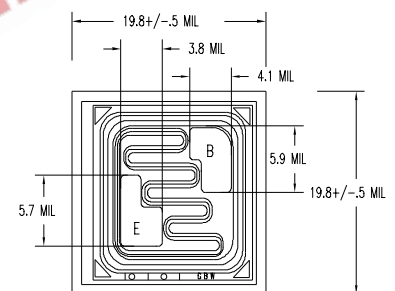
SWITCHING TRANSISTOR PNP SILICON

FEATURES:

- ELECTRICAL PERFORMANCE I.A.W. MIL-PRF-19500/291
- AVAILABLE IN WAFER OR CHIP FORM FOR HYBRID APPLICATIONS
- GENERAL PURPOSE-HIGH SPEED SWITCHING APPLICATIONS
- LOW $V_{CE(sat)}$: .4V @ $I_C = 150 \text{ mAdc}$



PHYSICAL DIMENSIONS



B = BASE
E = EMITTER
BACKSIDE = COLLECTOR

Absolute Maximum Ratings:

| Symbol | Parameter | Limit | Unit |
|----------------|--|-------------|------|
| V_{ce} | Collector-Emitter Voltage | 60 | Vdc |
| V_{cb} | Collector-Base Voltage | 60 | Vdc |
| V_{eb} | Emitter-Base Voltage | 5.0 | Vdc |
| I_c | Collector Current- Continuous | 600 | mAdc |
| T_j, T_{stg} | Operating Junction & Storage Temperature Range | -65 to +200 | °C |

Packaging Options:

W: Wafer (100% probed) U: Wafer (sample probed)
D: Chip (Waffle Pack) B: Chip (Vial)
V: Chip (Waffle Pack, 100% visually inspected) X: Other

Metallization Options:

Standard: Al Top / Au Backside (No Dash #)
Dash 1: Al Top / TiPdAg Backside

Processing Options:

Standard: Capable of JANTXV applications (No Suffix)
Suffix C: Commercial
Suffix S: Capable of S-Level equivalent applications

ORDERING INFORMATION:

PART #: 2N2907A__ - __
First Suffix Letter: Packaging Option
Second Suffix Letter: Processing Option
Dash #: Metallization Option

Electrical Characteristics @ T_j = 25 °C

| Symbol | Parameter | Conditions | Min | Max | Unit |
|-------------------------------------|---|--|-----|-----|------|
| OFF CHARACTERISTICS | | | | | |
| V(BR)CBO | Breakdown Voltage, Collector to Base | Bias Cond. D, I _C =10uAdc | 60 | | Vdc |
| V(BR)EBO | Breakdown Voltage, Emitter to Base | Bias Cond. D, I _E =10uAdc | 5 | | Vdc |
| V(BR)CEO | Breakdown Voltage, Collector to Emitter | Bias Cond. D, I _C = 10mAdc, pulsed | 60 | | Vdc |
| ICES | Collector to Emitter Cutoff Current | Bias Cond. D, V _{CE} =50Vdc | | 50 | nAdc |
| ICBO1 | Collector to Base Cutoff Current | Bias Cond. D, V _{CB} =50Vdc | | 10 | nAdc |
| IEBO | Emitter to Base Cutoff Current | Bias Cond. D, V _{EB} = 4Vdc | | 50 | nAdc |
| ON CHARACTERISTICS | | | | | |
| hFE1 | Forward-Current Transfer Ratio | V _{CE} =10Vdc, I _C =0.1mAdc | 75 | | |
| hFE2 | Forward-Current Transfer Ratio | V _{CE} =10Vdc, I _C =1.0mAdc | 100 | 450 | |
| hFE3 | Forward-Current Transfer Ratio | V _{CE} =10Vdc, I _C =10mAdc | 100 | | |
| hFE4 | Forward-Current Transfer Ratio | V _{CE} =10Vdc, I _C =150mAdc, pulsed | 100 | 300 | |
| hFE5 | Forward-Current Transfer Ratio | V _{CE} =10Vdc, I _C =500mAdc, pulsed | 50 | | |
| V _{CE(sat)1} | Collector to Emitter Saturation Voltage | I _C =150mAdc, I _B =15mAdc, pulsed | | 0.4 | Vdc |
| V _{CE(sat)2} | Collector to Emitter Saturation Voltage | I _C =500mAdc, I _B =50mAdc, pulsed | | 1.6 | Vdc |
| V _{BE(sat)1} | Base to Emitter Saturation Voltage | I _C =150mAdc, I _B =15mAdc, pulsed | 0.6 | 1.3 | Vdc |
| V _{BE(sat)2} | Base to Emitter Saturation Voltage | I _C =500mAdc, I _B =50mAdc, pulsed | | 2.6 | Vdc |
| SMALL SIGNAL CHARACTERISTICS | | | | | |
| h _{fe} | Short Circuit Forward Current Xfer Ratio | V _{CE} = 10Vdc, I _C =1mAdc, f= 1kHz | 100 | | |
| /h _{fe} / | Magnitude of Short Circuit Forward Current Transfer Ratio | V _{CE} = 20Vdc, I _C =50mAdc, f=100MHz | 2 | | |
| C _{obo} | Output Capacitance | V _{CB} = 10Vdc, I _E =0, 100kHz< f <1MHz | | 8 | pF |
| C _{ibo} | Input Capacitance | V _{EB} = 2.0Vdc, I _C =0, 100kHz< f <1MHz | | 30 | pF |
| SWITCHING CHARACTERISTICS | | | | | |
| t _{on} | Saturated Turn-on Time | As defined in 19500/291 Figure 7 | | 45 | nS |
| t _{off} | Saturated Turn-off Time | As defined in 19500/291 Figure 8 | | 300 | nS |