

CMLT2907A
SURFACE MOUNT
PIComini™
DUAL PNP SILICON TRANSISTORS



Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT2907A consists of two individual, isolated 2907A PNP silicon transistors, manufactured by the epitaxial planar process and epoxy molded in an SOT-563 surface mount package. This PIComini™ devices has been designed for small signal general purpose and switching applications.

MARKING CODE: L07

MAXIMUM RATINGS: (T_A=25°C)

| | SYMBOL | | UNITS |
|---------------------------|-----------------------------------|-------------|-------|
| Collector-Base Voltage | V _{CBO} | 60 | V |
| Collector-Emitter Voltage | V _{CEO} | 60 | V |
| Emitter-Base Voltage | V _{EBO} | 5.0 | V |
| Collector Current | I _C | 600 | mA |
| Power Dissipation | P _D | 350 | mW |
| Operating and Storage | | | |
| Junction Temperature | T _J , T _{stg} | -65 to +150 | °C |
| Thermal Resistance | θ _{JA} | 357 | °C/W |

ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (T_A=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------------------|---|-----|-----|-------|
| I _{CBO} | V _{CB} =50V | | 10 | nA |
| I _{CBO} | V _{CB} =50V, T _A =125°C | | 10 | µA |
| I _{CEV} | V _{CE} =30V, V _{BE} =0.5V | | 50 | nA |
| BV _{CBO} | I _C =10µA | 60 | | V |
| BV _{CEO} | I _C =10mA | 60 | | V |
| BV _{EBO} | I _E =10µA | 5.0 | | V |
| V _{CE(SAT)} | I _C =150mA, I _B =15mA | | 0.4 | V |
| V _{CE(SAT)} | I _C =500mA, I _B =50mA | | 1.6 | V |
| V _{BE(SAT)} | I _C =150mA, I _B =15mA | | 1.3 | V |
| V _{BE(SAT)} | I _C =500mA, I _B =50mA | | 2.6 | V |
| h _{FE} | V _{CE} =10V, I _C =0.1mA | 75 | | |
| h _{FE} | V _{CE} =10V, I _C =1.0mA | 100 | | |
| h _{FE} | V _{CE} =10V, I _C =10mA | 100 | | |
| h _{FE} | V _{CE} =10V, I _C =150mA | 100 | 300 | |
| h _{FE} | V _{CE} =10V, I _C =500mA | 50 | | |

R1 (13-November 2002)

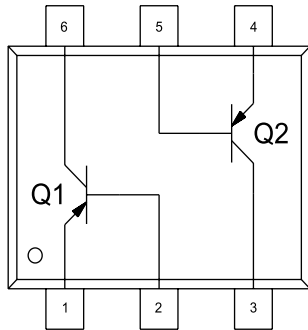
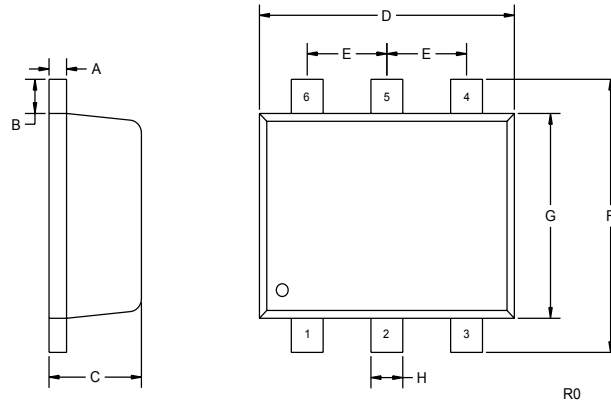
ELECTRICAL CHARACTERISTICS: Continued

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|-----------|---|-----|-----|-------|
| f_T | $V_{CE}=20V, I_C=50mA, f=100MHz$ | 200 | | MHz |
| C_{ob} | $V_{CB}=10V, I_E=0, f=1.0MHz$ | | 8.0 | pF |
| C_{ib} | $V_{BE}=2.0V, I_C=0, f=1.0MHz$ | | 30 | pF |
| t_{on} | $V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA$ | | 45 | ns |
| t_d | $V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA$ | | 10 | ns |
| t_r | $V_{CC}=30V, V_{BE}=0.5V, I_C=150mA, I_{B1}=15mA$ | | 40 | ns |
| t_{off} | $V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA$ | | 100 | ns |
| t_s | $V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA$ | | 80 | ns |
| t_f | $V_{CC}=6.0V, I_C=150mA, I_{B1}=I_{B2}=15mA$ | | 30 | ns |

SOT-563 CASE - MECHANICAL OUTLINE

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.004 | 0.007 | 0.10 | 0.18 |
| B | 0.008 | | 0.20 | |
| C | 0.022 | 0.024 | 0.56 | 0.60 |
| D | 0.059 | 0.067 | 1.50 | 1.70 |
| E | 0.020 | | 0.50 | |
| F | 0.061 | 0.067 | 1.55 | 1.70 |
| G | 0.047 | | 1.20 | |
| H | 0.006 | 0.012 | 0.15 | 0.30 |

SOT-563 (REV: R0)



LEAD CODE:

- 1) EMITTER Q1
- 2) BASE Q1
- 3) COLLECTOR Q2
- 4) EMITTER Q2
- 5) BASE Q2
- 6) COLLECTOR Q1

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