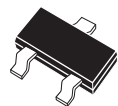


CMPH81
SURFACE MOUNT
PNP SILICON RF TRANSISTOR



SOT-23 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPH81 type is a PNP Silicon RF Transistor, epoxy molded in a surface mount package, designed for general RF amplifier applications.

MARKING CODE: C3D

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$)

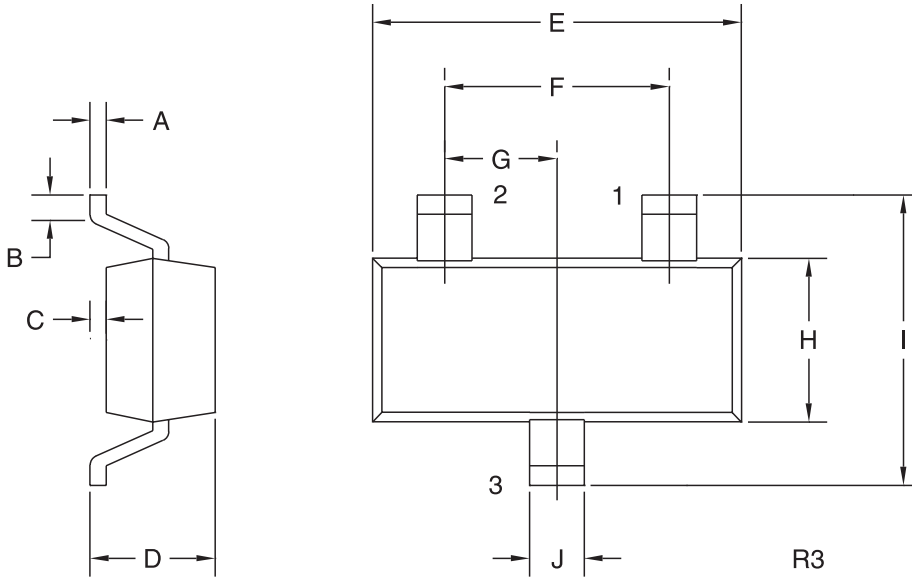
| | SYMBOL | | UNITS |
|--------------------------------|----------------|-------------|----------------------|
| Collector-Base Voltage | V_{CB0} | 20 | V |
| Collector-Emitter Voltage | V_{CEO} | 20 | V |
| Emitter-Base Voltage | V_{EBO} | 3.0 | V |
| Collector Current (Continuous) | I_C | 50 | mA |
| Power Dissipation | P_D^* | 225 | mW |
| Operating and Storage | | | |
| Junction Temperature | T_J, T_{stg} | -55 to +150 | $^{\circ}\text{C}$ |
| Thermal Resistance | θ_{JA} | 556 | $^{\circ}\text{C/W}$ |

ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$ UNLESS OTHERWISE NOTED)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|--|-----|------|-------|
| I_{CBO} | $V_{CB}=10\text{V}$ | | 100 | nA |
| I_{EBO} | $V_{EB}=2.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=10\mu\text{A}$ | 20 | | V |
| BV_{CEO} | $I_C=1.0\text{mA}$ | 20 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 3.0 | | V |
| $V_{CE(SAT)}$ | $I_C=5.0\text{mA}, I_B=500\mu\text{A}$ | | 0.5 | V |
| $V_{BE(ON)}$ | $V_{CE}=10\text{V}, I_C=5.0\text{mA}$ | | 0.9 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=5.0\text{mA}$ | 60 | | |
| f_T | $V_{CE}=10\text{V}, I_C=5.0\text{mA}, f=100\text{MHz}$ | 600 | | MHz |
| C_{cb} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 0.85 | pF |
| C_{ce} | $V_{CB}=10\text{V}, I_B=0, f=1.0\text{MHz}$ | | 0.65 | pF |

* FR-4 Epoxy PCB Substrate 1.6" x 1.6" x 0.06"

SOT-23 CASE- MECHANICAL OUTLINE



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

MARKING CODE: C3D

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.003 | 0.007 | 0.08 | 0.18 |
| B | 0.006 | - | 0.15 | - |
| C | - | 0.005 | - | 0.13 |
| D | 0.035 | 0.043 | 0.89 | 1.09 |
| E | 0.110 | 0.120 | 2.80 | 3.05 |
| F | 0.075 | | 1.90 | |
| G | 0.037 | | 0.95 | |
| H | 0.047 | 0.055 | 1.19 | 1.40 |
| I | 0.083 | 0.098 | 2.10 | 2.49 |
| J | 0.014 | 0.020 | 0.35 | 0.50 |

SOT-23 (REV: R3)



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