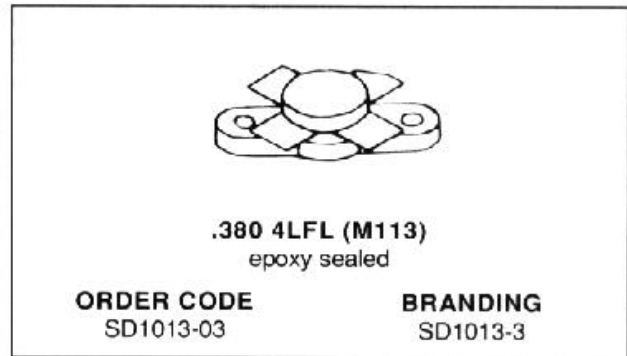
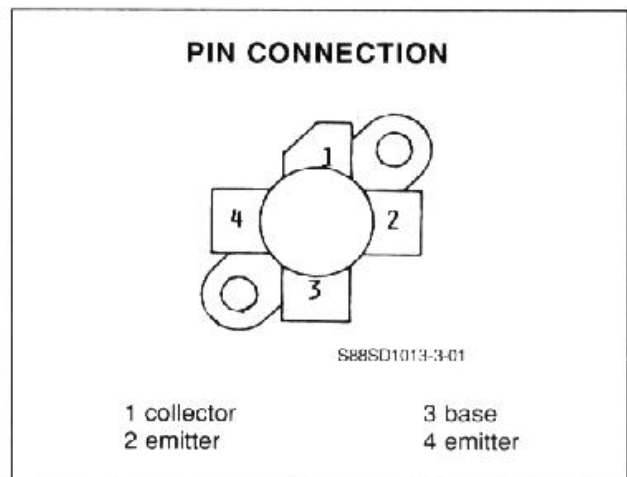


- FM CLASS C TRANSISTOR
- FREQUENCY 150MHz
- VOLTAGE 28V
- POWER OUT 10W
- POWER GAIN 10dB
- EFFICIENCY 55%TYP
- COMMON EMITTER


DESCRIPTION

The SD1013-3 is a 28V epitaxial silicon NPN planar transistor designed for 108-152 MHz FM applications.

This device utilizes diffused emitter resistors to achieve infinite VSWR at rated operating conditions.


ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

| Symbol | Parameter | Value | Unit |
|-----------|-----------------------------|-------------|-------------|
| V_{CBO} | Collector - Base Voltage | 65 | V |
| V_{CEO} | Collector - Emitter Voltage | 35 | V |
| V_{CES} | Collector - Emitter Voltage | 65 | V |
| V_{EBO} | Emitter - Base Voltage | 4 | V |
| I_C | Collector Current | 1 | A |
| P_{tot} | Total Power Dissipation | 13 | W |
| T_{stg} | Storage Temperature | - 65 to 150 | $^{\circ}C$ |
| T_j | Junction Temperature | 200 | $^{\circ}C$ |

THERMAL DATA

| | | | |
|---------------|----------------------------------|------|---------------|
| $R_{th(j-c)}$ | Junction-case Thermal Resistance | 13.5 | $^{\circ}C/W$ |
|---------------|----------------------------------|------|---------------|

Note : Above parameters , ratings , limits and conditions are subject to change.

| Test Conditions | | | Value | | |
|-----------------|------------------|---------------|-------|------|------|
| | | | Min. | Typ. | Max. |
| BV_{CBO} | $I_C = 200mA$ | $I_E = 0$ | 65 | | |
| BV_{CES} | $I_C = 200mA$ | $V_{BE} = 0$ | 65 | | |
| BV_{CEO} | $I_C = 200mA$ | $I_B = 0$ | 35 | | |
| BV_{EBO} | $I_E = 10.0mA$ | $I_C = 0$ | 4 | | |
| I_{CBO} | $V_{CB} = 30.0V$ | $I_E = 0$ | | | 1 |
| h_{FE} | $V_{CE} = 5.0V$ | $I_C = 200mA$ | 5 | | 200 |

DYNAMIC

| Symbol | Test Conditions | | | Value | | |
|----------|-----------------|----------------|----|-------|------|------|
| | | | | Min. | Typ. | Max. |
| P_O | $f = 150MHz$ | $V_{CC} = 28V$ | 10 | | | |
| G_P | $f = 150MHz$ | $V_{CC} = 28V$ | 10 | | | |
| C_{ob} | $f = 1MHz$ | $V_{CB} = 30V$ | | | 15 | |

Note : Above parameters , ratings , limits and conditions are subject to change .