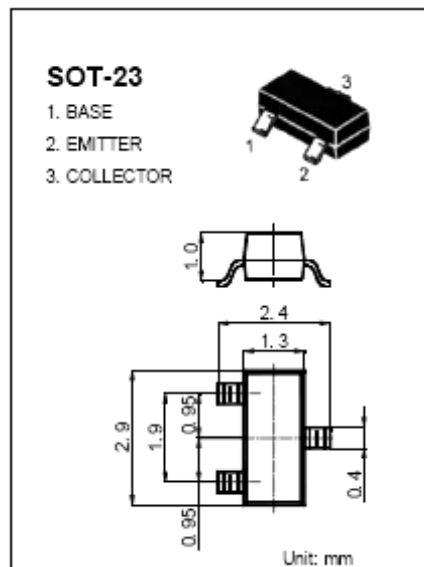


### FEATURES

- Power dissipation,  $P_{CM}$ : 0.2W ( $T_{amb}=25^{\circ}C$ )
- Collector current,  $I_{CM}$ : 0.2A
- Collector-base voltage,  $V_{(BR)CBO}$ : 60V
- Operating and storage junction temperature range:  
 $T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$
- SOT-23 plastic-encapsulate package

Device Marking: AM1



### ELECTRICAL CHARACTERISTICS

| Parameter                            | Symbol        | Test Conditions                            | Min | Max  | Unit    |
|--------------------------------------|---------------|--------------------------------------------|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 100 \mu A, I_E = 0$                 | 60  |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $V_{IC} = 1 mA, I_B = 0$                   |     | 40   | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = 100 \mu A, I_C = 0$                 | 6   |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 60V, I_E = 0$                    |     | 0.1  | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = 40V, I_B = 0$                    |     | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$                     |     | 0.1  | $\mu A$ |
| DC current gain                      | $H_{FE(1)}$   | $V_{CE} = 10V, I_C = 1mA$                  |     | 100  |         |
|                                      | $H_{FE(2)}$   | $V_{CE} = 1V, I_C = 50mA$                  | 60  | 300  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 50mA, I_B = 5mA$                    |     | 0.3  | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = 50mA, I_B = 5mA$                    |     | 0.95 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = 20V, I_C = 10mA$<br>$f = 100MHz$ | 250 |      | MHz     |
| Delay Time                           | $t_d$         | $V_{CC} = 3.0V_{dc}, V_{BE} = 0.5V_{dc}$   |     | 35   | nS      |
| Rise Time                            | $t_r$         | $I_C = 10mA_{dc}, I_{B1} = 1.0mA_{dc}$     |     | 35   | nS      |
| Storage Time                         | $t_s$         | $V_{CC} = 3.0V_{dc}, I_C = 10mA_{dc}$      |     | 200  | nS      |
| Fall Time                            | $t_f$         | $I_{B1} = I_{B2} = 1.0mA_{dc}$             |     | 50   | nS      |

Note: Unless otherwise specified, these specifications apply over the operating ambient temperature of  $25^{\circ}C$ .

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