NEC

# SILICON TRANSISTOR
# 2SC2762

## NPN SILICON EPITAXIAL TRANSISTOR FOR UHF-BAND POWER AMPLIFIER INDUSTRIAL USE

### DESCRIPTION

The 2SC2762 is an NPN silicon epitaxial transistor designed for UHF-band medium power amplifiers.

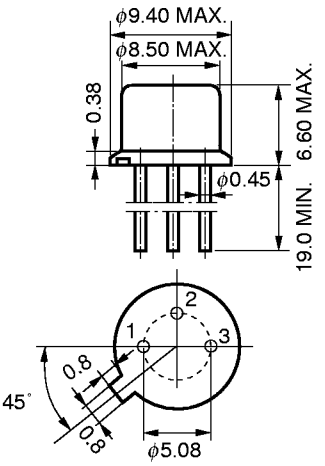
### FEATURE

Medium power output

$P_{out}$ = 1.4 W TYP. @f = 500 MHz, $V_{CC}$ = 12.6 V, $P_{in}$ = 0.25 W

### PACKAGE DIMENSIONS

**(in millimeters)**




PIN CONNECTIONS
1. Emitter
2. Base
3. Collector

All leads insulated from case

### ABSOLUTE MAXIMUM RATINGS ($T_A$ = 25 °C)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 35 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 18 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 3.0 | V |
| Collector Current | $I_C$ | 0.4 | A |
| Total Power Dissipation | $P_{T(T_A = 25\ °C)}$ | 800 | mW |
| Total Power Dissipation | $P_{T(T_C = 25\ °C)}$ | 7 | W |
| Junction Temperature | $T_j$ | 200 | °C |
| Storage Temperature | $T_{stg}$ | –65 to +200 | °C |

### ELECTRICAL CHARACTERISTICS ($T_A$ = 25 °C)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}$ = 20 V, $I_E$ = 0 | | | 0.1 | mA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB}$ = 2 V, $I_C$ = 0 | | | 0.1 | mA |
| DC Current Gain | $h_{FE}$ | $V_{CE}$ = 10 V, $I_C$ = 100 mA (pulse) | 20 | 60 | 200 | |
| Output Capacitance | $C_{ob}$ | $V_{CB}$ = 10 V, $I_E$ = 0, f = 1.0 MHz* | | 2.5 | 4.0 | pF |
| Output Power | $P_{out}$ | f = 500 MHz, $V_{CC}$ = 12.6 V, $P_{in}$ = 24 dBm | 30 | 31.5 | | dBm |
| Collector Efficiency | $\eta_C$ | f = 500 MHz, $V_{CC}$ = 12.6 V, $P_{in}$ = 24 dBm | 60 | 80 | | % |

* Emitter and case should be grounded.

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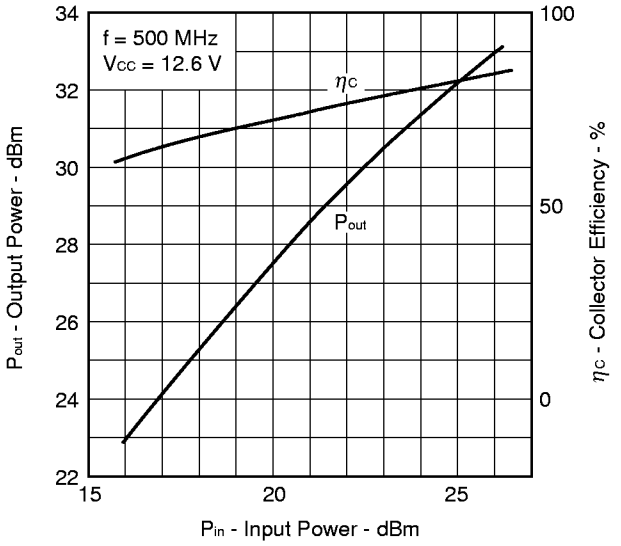
## TYPICAL CHARACTERISTICS ($T_A$ = 25 °C)

OUTPUT POWER AND COLLECTOR EFFICIENCY vs. INPUT POWER




S-PARAMETER