

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N6724

2N6725

NPN SILICON DARLINGTON
POWER TRANSISTOR

JEDEC TO-237 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6724, 2N6725 are Silicon NPN Darlington Power Transistors designed for amplifier applications.

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| | SYMBOL | 2N6724 | 2N6725 | UNIT |
|--|----------------|-------------|--------|----------------------|
| Collector-Base Voltage | V_{CB0} | 50 | 60 | V |
| Collector-Emitter Voltage | V_{CE0} | 40 | 50 | V |
| Emitter-Base Voltage | V_{EB0} | 12 | | V |
| Collector Current | I_C | 2.0 | | A |
| Base Current | I_B | 500 | | mA |
| Power Dissipation ($T_C=25^{\circ}\text{C}$) | P_D | 2.0 | | W |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 TO +150 | | $^{\circ}\text{C}$ |
| Thermal Resistance | θ_{JC} | 62.5 | | $^{\circ}\text{C/W}$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

| SYMBOL | TEST CONDITIONS | 2N6724 | | 2N6725 | | UNIT |
|---------------|---|--------|--------|--------|--------|---------------|
| | | MIN | MAX | MIN | MAX | |
| I_{CB0} | $V_{CB}=30\text{V}$ | | 0.1 | | - | μA |
| I_{CB0} | $V_{CB}=40\text{V}$ | | - | | 0.1 | μA |
| I_{EB0} | $V_{EB}=10\text{V}$ | | 0.1 | | 0.1 | μA |
| BV_{CB0} | $I_C=1.0\mu\text{A}$ | 50 | | 60 | | V |
| BV_{EB0} | $I_E=10\mu\text{A}$ | 12 | | 12 | | V |
| BV_{CES} | $I_C=1.0\text{mA}$ | 40 | | 50 | | V |
| $V_{CE(SAT)}$ | $I_C=1.0\text{A}, I_B=2.0\text{mA}$ | | 1.5 | | 1.5 | V |
| $V_{BE(ON)}$ | $V_{CE}=5.0\text{V}, I_C=1.0\text{A}$ | | 2.0 | | 2.0 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=200\text{mA}$ | 25,000 | | 25,000 | | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=1.0\text{A}$ | 4,000 | 40,000 | 4,000 | 40,000 | |
| f_T | $V_{CE}=5.0\text{V}, I_C=200\text{mA}, f=100\text{MHz}$ | 1.0 | 10 | 1.0 | 10 | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 10 | | 10 | pF |