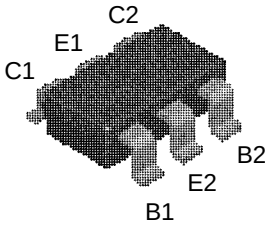
FAIRCHILD SEMICONDUCTOR TM

*Discrete Power & Signal Technologies*

# FMBA0656




Package: SuperSOT-6
Device Marking: **.003**
Note: The " **.** " (dot) signifies Pin 1
Transistor 1 is NPN device,
transistor 2 is PNP device.

## NPN & PNP Complementary Dual Transistor
## SuperSOT- 6 Surface Mount Package

This device was designed for general purpose amplifier applications at collector currents to 300mA. Sourced from Process 33 (NPN) and Process 73 (PNP).

## Absolute Maximum Ratings

$T_A$ = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CEO}$ | Collector-Emitter Voltage | 80 | V |
| $V_{CBO}$ | Collector-Base Voltage | 80 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 4 | V |
| $I_C$ | Collector Current (continuous) | 500 | mA |
| $P_D$ | Power Dissipation @Ta = 25°C* | 0.7 | W |
| $T_{STG}$ | Storage Temperature Range | -55 to +150 | °C |
| $T_J$ | Junction Temperature | 150 | °C |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 180 | °C/W |

*Pd total, for both transistors. For each transistor, Pd = 350mW.

## Electrical Characteristics

$T_A$ = 25°C unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|---|---|---|---|---|---|
| $BV_{CEO}$ | Collector to Emitter Voltage | Ic = 1.0 mA | 80 | | V |
| $BV_{CBO}$ | Collector to Base Voltage | Ic = 100 uA | 80 | | V |
| $BV_{EBO}$ | Emitter to Base Voltage | Ie = 100 uA | 4 | | V |

## NPN & PNP Complementary Dual Transistor

**(continued)**

## Electrical Characteristics

$T_{A = 25°C \text{ unless otherwise noted}}$

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|---|---|---|---|---|---|
| $I_{CBO}$ | Collector Cutoff Current | Vcb = 80 V | | 100 | nA |
| $I_{CEO}$ | Collector Cutoff Current | Vce = 60 V | | 100 | nA |
| $h_{FE}$ | DC Current Gain | Vce = 1 V, Ic = 10 mA<br>Vce = 1 V, Ic = 100 mA | 100<br>100 | | - |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | Ic = 100 mA, Ib = 10 mA | | 0.25 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | Ic = 100 mA, Vce = 1 V | | 1.2 | V |

### Small - Signal Characteristics

| | | | | | |
|---|---|---|---|---|---|
| $f_T$ | Current Gain - Bandwidth Product | Vce = 1 V, Ic = 100 mA, f = 100 MHz | 50 | | - |