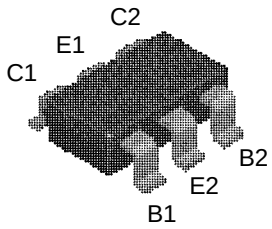
FAIRCHILD SEMICONDUCTOR TM

Discrete Power & Signal Technologies

FMB2227A



Package: SuperSOT-6
Device Marking: **.001**
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 complementary dual device was designed for use as a medium power amplifier and switch requiring collector currents up to 300mA. Sourced from Pr19 (NPN) and Pr63 (PNP).

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	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

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
BV_{CEO}	Collector to Emitter Voltage	Ic = 10 mA	30		V
BV_{CBO}	Collector to Base Voltage	Ic = 10 uA	60		V
BV_{EBO}	Emitter to Base Voltage	Ie = 10 uA	5		V

NPN & PNP Complementary Dual Transistor

(continued)

Electrical Characteristics

$T_{A = 25°C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
I_{CBO}	Collector Cutoff Current	Vcb = 50V		30	nA
I_{EBO}	Emitter Cutoff Current	Veb = 3.0V		30	nA
h_{FE}	DC Current Gain	Vce = 10V, Ic = 1.0mA Vce = 10V, Ic = 10mA Vce = 10V, Ic = 150mA Vce = 10V, Ic = 300mA	50 75 100 30		-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	Ic = 150mA, Ib=15mA Ic = 300mA, Ib=30mA		0.4 1.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	Ic = 150mA, Ib=15mA		1.3	V

Small - Signal Characteristics			Typical	
C_{OB}	Output Capacitance	Vcb = 10V, f = 1.0MHz	6	pF
C_{IB}	Input Capacitance	Veb = 0.5V, f = 100kHz	20	pF
f_T	Current Gain - Bandwidth Product	Vce = 20V, Ic = 50mA, f = 100MHz	250	MHz