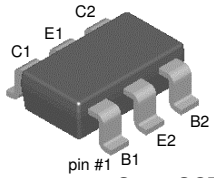
FAIRCHILD
SEMICONDUCTOR®

FMB5551

NPN General Purpose Amplifier
SuperSOT-6 Surface Mount Package

- This device is designed for general purpose high voltage amplifiers and gas discharge display driving.
- Sourced from process 16.
- See MMBT5551 for characteristics.



SuperSOT™-6
Mark: .3S
Dot denotes pin #1

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	160	V
V_{CBO}	Collector-Base Voltage	180	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	600	mA
P_C	Collector Dissipation (T_a=25°C) *	0.7	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	- 55 ~ 150	°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	180	°C/W

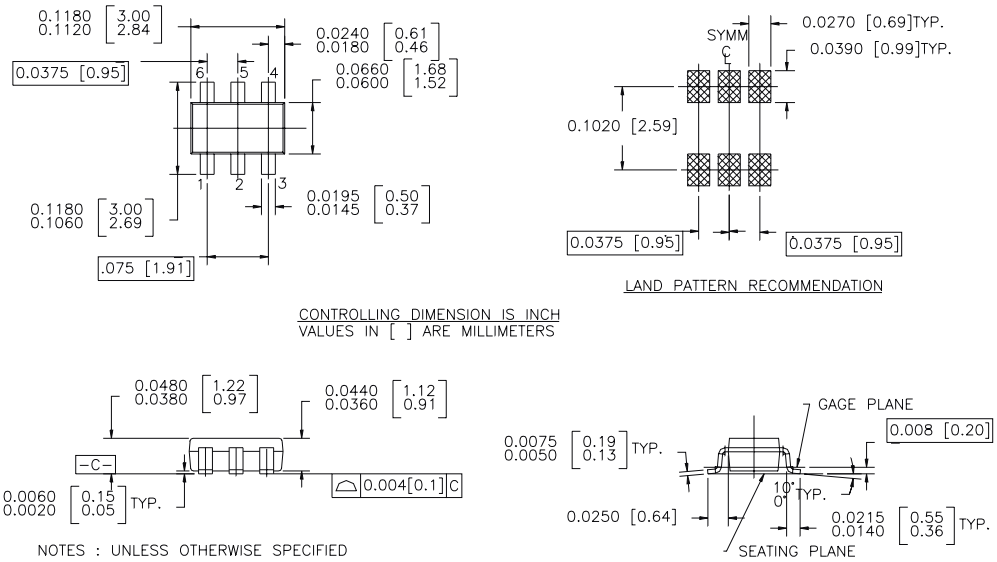
* Pd total, for both transistors. For each transistor, Pd = 350mW.

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
BV_{CEO}	Collector-Emitter Voltage	I_C = 1mA	160			V
BV_{CBO}	Collector-Base Voltage	I_C = 10μA	180			V
BV_{EBO}	Emitter-Base Voltage	I_E = 10μA	6			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 120V V_{CB} = 120V, T = 100°C			50 50	nA μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V			50	nA
On Characteristics						
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 1mA V_{CE} = 5V, I_C = 10mA V_{CE} = 5V, I_C = 50mA	80 80 30		 250	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 1mA I_C = 50mA, I_B = 5mA			0.15 0.2	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 10mA, I_B = 1mA I_C = 50mA, I_B = 5mA			1 1	V
Small Signal Characteristics				**TYPICAL**		
C_{ob}	Output Capacitance	V_{CB} = 10V, f = 1MHz			6	pF
C_{ib}	Input Capacitance	V_{CB} = 0.5V, f = 1MHz			20	pF
f_T	Current gain Bandwidth Product	V_{CE} = 10V, I_C = 10mA f = 100MHz	100		300	MHz
NF	Noise Figure	V_{CE} = 5V, I_C = 200μA f = 1MHz, R_S = 2kΩ, B = 200Hz			8	dB
h_{FE}	Small Signal Current Gain	V_{CE} = 10V, I_C = 1mA f = 1KHz	50		250	

Package Dimensions

SuperSOT™-6



NOTES : UNLESS OTHERWISE SPECIFIED

1.0 STANDARD LEAD FINISH : 150 MICROINCHES 93.81 MICROMETERS) MINIMUM TIN / LEAD (SOLDER) ON COPPER.

2.0 NO JEDEC REGISTRATION AS OF JULY 1996

SUPER SOT 6 LEADS

Dimensions in Millimeters

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CROSSVOLT™	GlobalOptoisolator™	MicroPak™	QS™	SyncFET™
DOME™	GTO™	MICROWIRE™	QT Optoelectronics™	TinyLogic®
EcoSPARK™	HiSeC™	MSX™	Quiet Series™	TINYOPTO™
E^2CMOS™	I^2C™	MSXPro™	RapidConfigure™	TruTranslation™
EnSigna™	*i-Lo*™	OCX™	RapidConnect™	UHC™
FACT™	ImpliedDisconnect™	OCXPro™	µSerDes™	UltraFET®
FACT Quiet Series™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
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The Power Franchise®		PACMAN™	SPM™	
Programmable Active Droop™		POP™	Stealth™	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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