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[Fairchild Semiconductor](#)  
[FMB5551](#)

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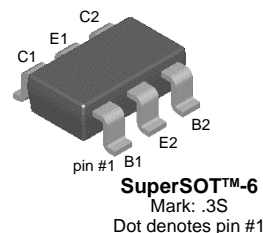
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



## 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.



### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ 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 ( $T_a=25^\circ\text{C}$ ) *	0.7	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	- 55 ~ 150	$^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	180	$^\circ\text{C/W}$

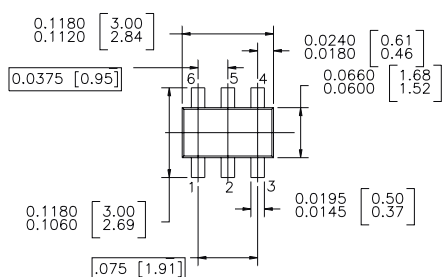
\* Pd total, for both transistors. For each transistor, Pd = 350mW.

### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

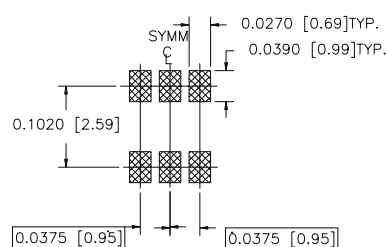
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
<b>Off Characteristics</b>						
$BV_{CEO}$	Collector-Emitter Voltage	$I_C = 1\text{mA}$	160			V
$BV_{CBO}$	Collector-Base Voltage	$I_C = 10\mu\text{A}$	180			V
$BV_{EBO}$	Emitter-Base Voltage	$I_E = 10\mu\text{A}$	6			V
$I_{CBO}$	Collector Cut-off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

## Package Dimensions

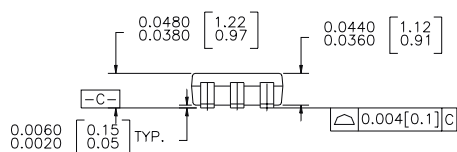
### SuperSOT™-6



CONTROLLING DIMENSION IS INCH  
VALUES IN [ ] ARE MILLIMETERS



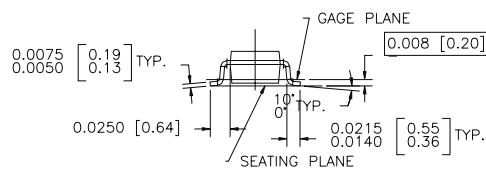
LAND PATTERN RECOMMENDATION



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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CoolFET <sup>™</sup>	FRFET <sup>™</sup>	MicroFET <sup>™</sup>	QFET <sup>®</sup>	SuperSOT <sup>™</sup> -8
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Programmable Active Droop <sup>™</sup>		POP <sup>™</sup>	Stealth <sup>™</sup>	

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