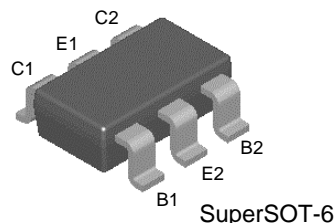


FMB5551

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
Off Characteristics						
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 μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 4\text{V}$			50	nA
On Characteristics						
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
Small Signal Characteristics						
			TYPICAL			
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	$V_{CE} = 5\text{V}, I_C = 200\mu\text{A}$ $f = 1\text{MHz}, R_S = 2\text{k}\Omega, B = 200\text{Hz}$			8	dB
h_{FE}	Small Signal Current Gain	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$ $f = 1\text{KHz}$	50		250	

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