

FEATURES

Complementary to MMBT5401

Ideal for medium power amplification and switching

MARKING: G1
MMBT5551 (NPN)

MAXIMUM RATINGS (TA=25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.6	A
Collector Power Dissipation	P_C	0.3	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=100\mu A, I_E=0$	180			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1mA, I_B=0$	160			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=120V, I_E=0$			50	nA
Emitter cut-off current	I_{EB}	$V_{EB}=4V, I_C=0$			50	nA
DC current gain	h_{FE1}^*	$V_{CE}=5V, I_C=1mA$	80			
	h_{FE2}^*	$V_{CE}=5V, I_C=10mA$	100		300	
	h_{FE3}^*	$V_{CE}=5V, I_C=50mA$	50			
Collector-emitter saturation voltage	V_{CEsat}^*	$I_C=10mA, I_B=1mA$			0.15	V
		$I_C=50mA, I_B=5mA$			0.2	
Base-emitter saturation voltage	V_{BEsat}^*	$I_C=10mA, I_B=1mA$			1	V
		$I_C=50mA, I_B=5mA$			1	
Transition frequency	f_T	$V_{CE}=10V, I_C=10mA, f=100MHz$	100		300	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF
Input capacitance	C_{ib}	$V_{BE}=0.5V, I_C=0, f=1MHz$			20	pF
Noise figure	NF	$V_{CE}=5V, I_C=0.25mA,$ $f=10Hz$ to $15.7KHz, R_s=1k$			8	dB

 *Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

MMBT5551 Typical Characteristics

