

**FEATURES**

Complementary to MMBT5401

Ideal for medium power amplification and switching

**MARKING: G1**
**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

**MMBT5551 (NPN)**

**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	$V_{CE}=5V, I_C=0.25mA, f=10Hz \text{ to } 15.7KHz, R_s=1k$			8	dB

\*Pulse test

**MMBT5551** Typical Characteristics

