CHINA BASE INTERNATIONAL

SOT-523

MMBT5551T

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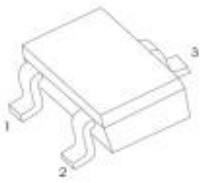
TRANSISTOR (NPN)

SOT - 523



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

Complementary to MMBT5401T

Ideal for medium power amplification and switching

MARKING: G1

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.6	A
P_C	Collector Power Dissipation	200	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C= 1mA, I_B=0	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 10μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}= 120V, I_E=0			50	nA
Emitter cut-off current	I_{EBO}	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, Rs=1kΩ			8	dB

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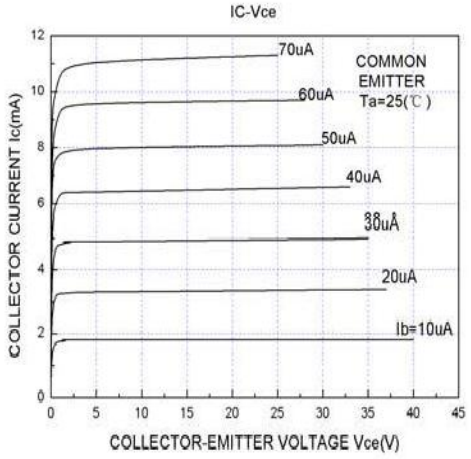
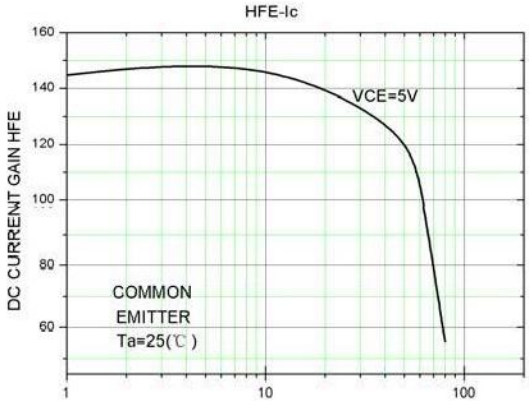
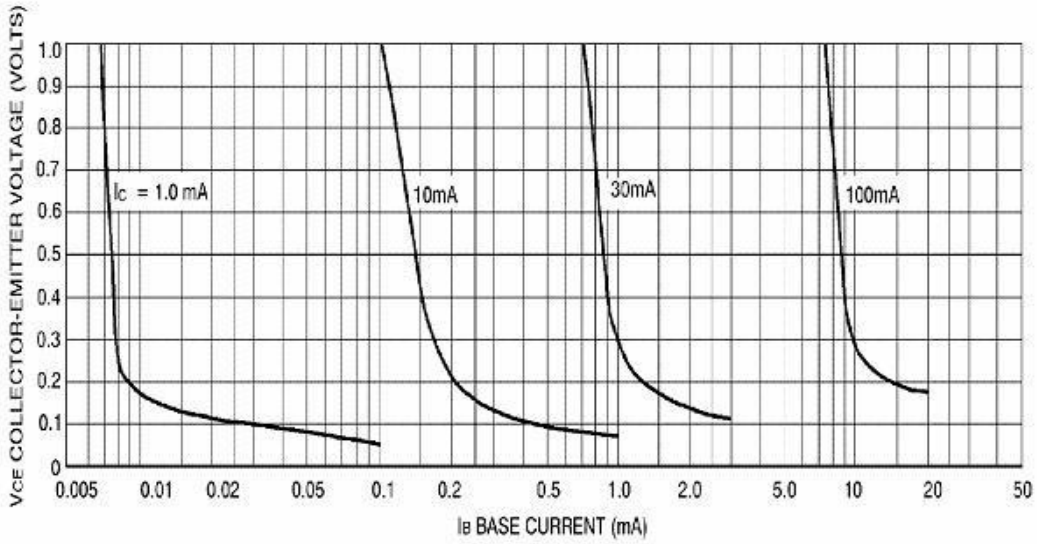
Typical Characteristics







Collector Saturation Region

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