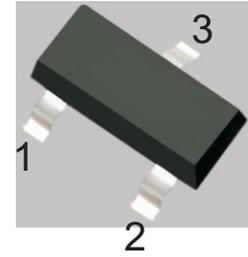


MMBT5551
 NPN TRANSISTOR

SOT-23



1.BASE
 2.EMITTER
 3.COLLECTOR

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	160	V
Collector-Emitter Voltage	V_{CEO}	140	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current — Continuous	I_C	600	mA
Collector Power Dissipation	P_C	625	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	200	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	°C

CLASSIFICATION OF h_{FE}

Test conditions	$V_{CE}=5V, I_C=80mA$	$V_{CE}=5V, I_C=10mA$
Range	80~	100~300

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	5			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}	$V_{CE} = 5V, I_C = 1mA$				
	h_{FE2}	$V_{CE} = 5V, I_C = 10mA$	100		300	
	h_{FE3}	$V_{CE} = 5V, I_C = 80mA$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 5mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50mA, I_B = 5mA$			1	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA, f=30MHz$	100		300	MHz

TYPICAL CHARACTERISTICS

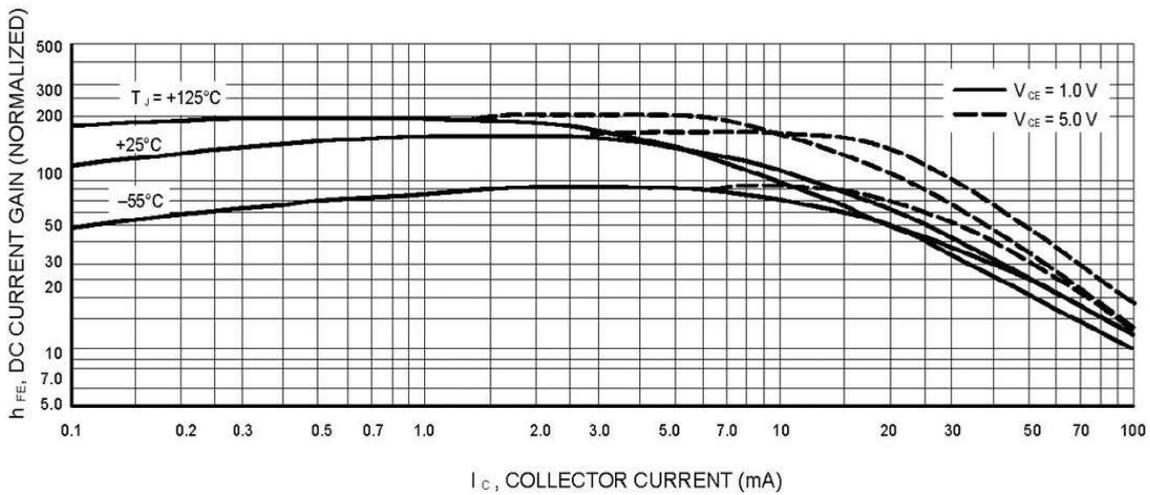


Figure 15. DC Current Gain

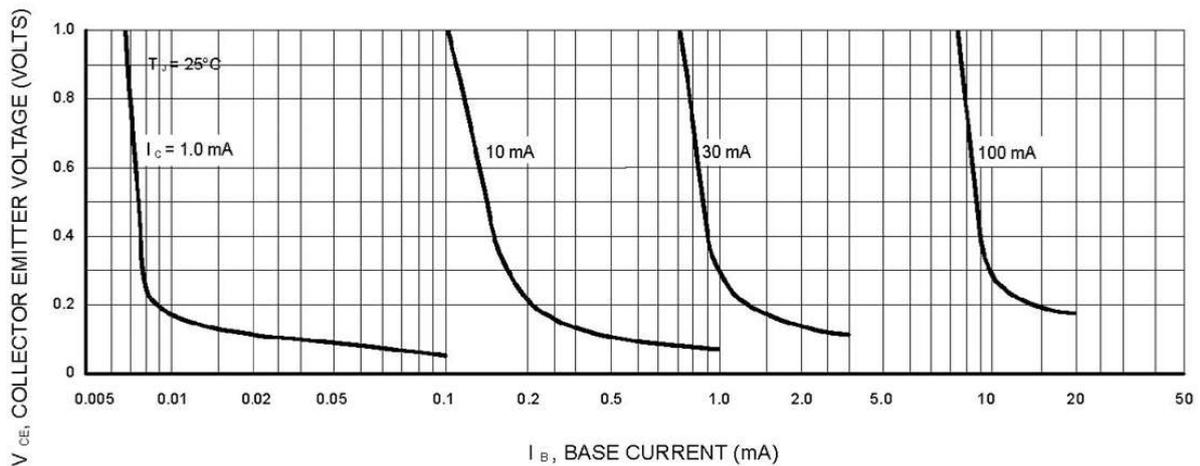


Figure 16. Collector Saturation Region

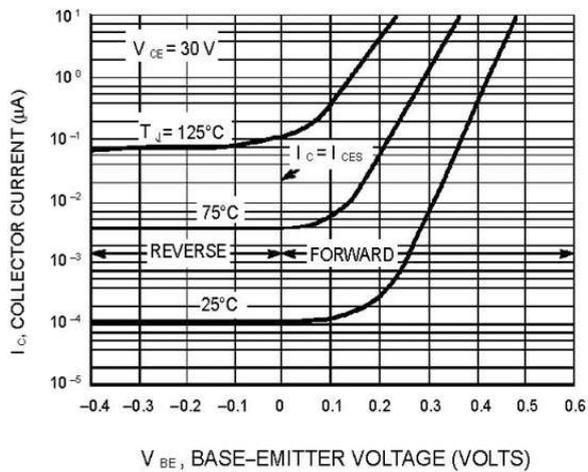


Figure 3. Collector Cut-Off Region

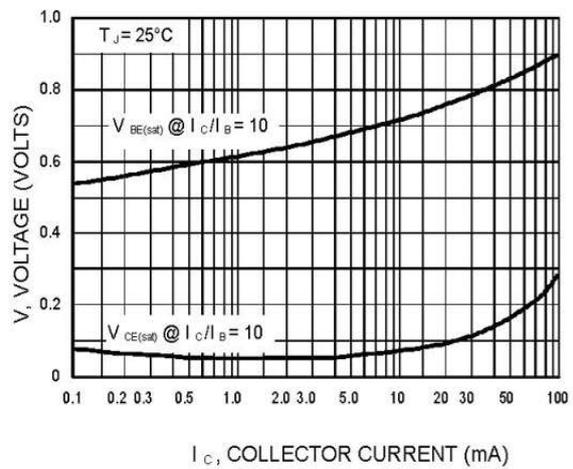
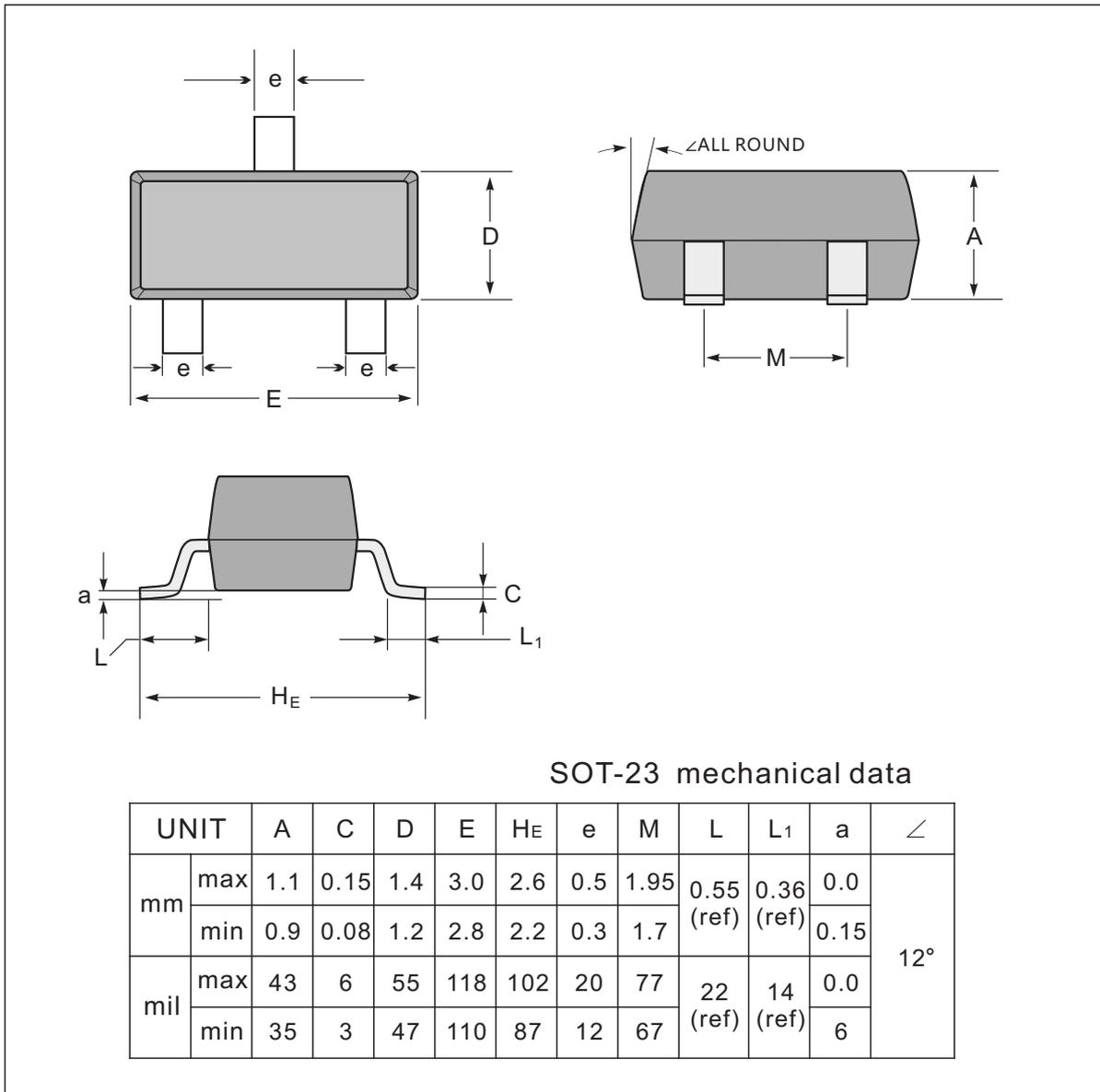
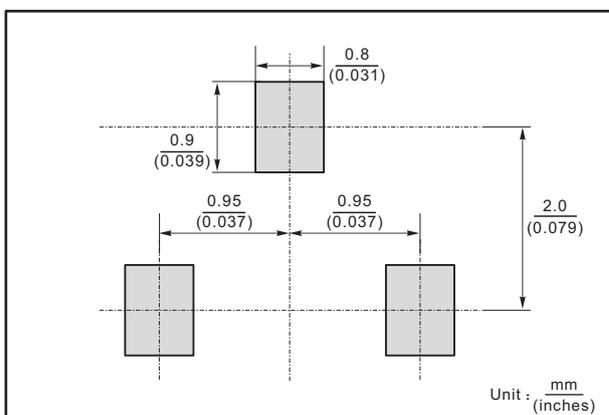


Figure 4. "On" Voltages

SOT-23 Package Outline Dimensions



The recommended mounting pad size



Marking

Type number	Marking code
MMBT5551	G1