

■ NPN Transistors



■ Simplified outline(SOT-23)

■ Features

- High Voltage Transistors
- Pb-Free Packages are Available

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	180	V
Collector-emitter voltage	V _{CEO}	160	V
Emitter-base voltage	V _{EB0}	6	V
Collector current-continuous	I _C	0.6	A
Collector Power Dissipation	P _C	300	mW
Junction and storage temperature	T _J , T _{stg}	-55 to +150	°C

■ Electrical Characteristics Ta = 25°C

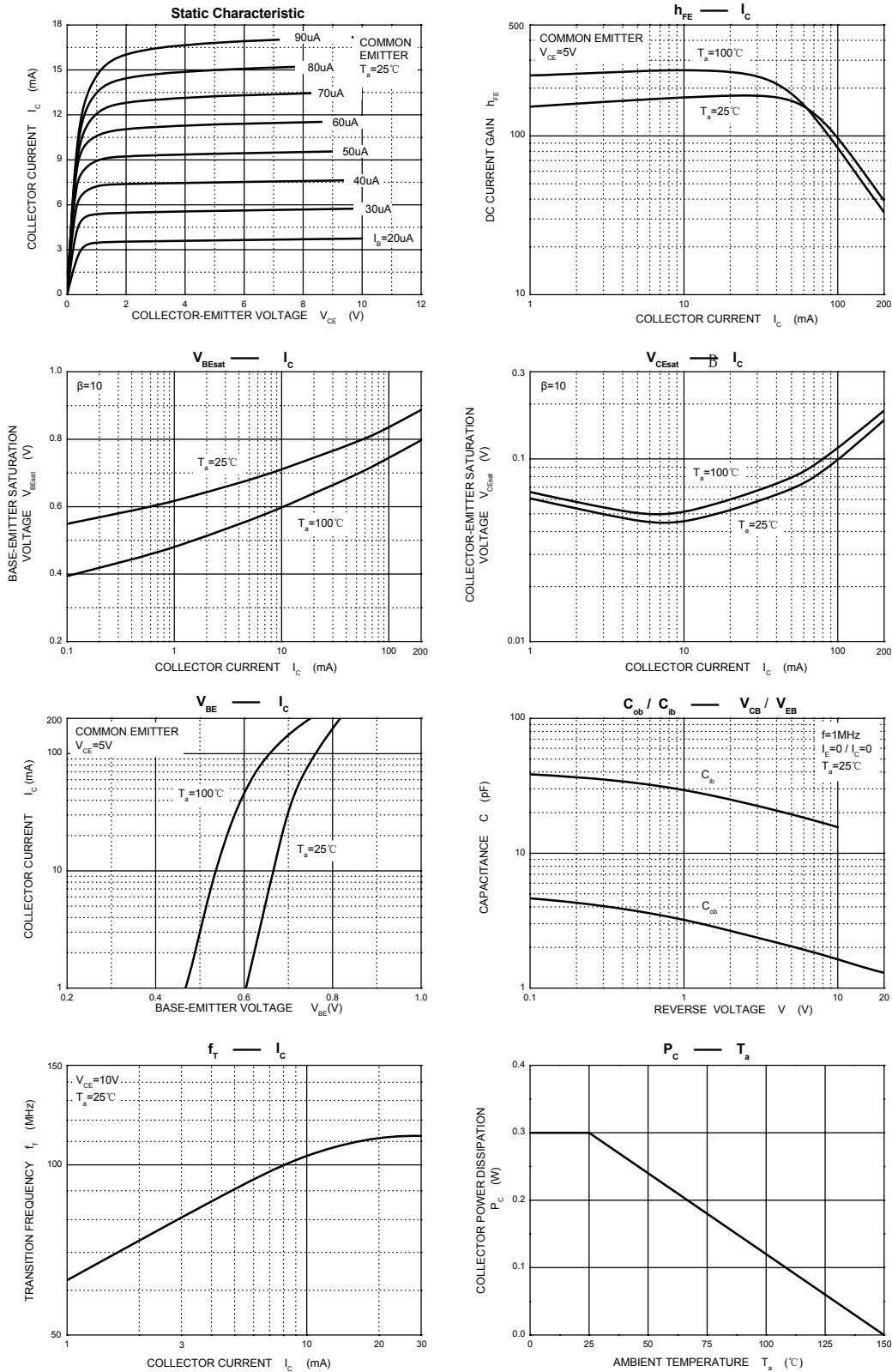
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CB0}	I _C = 100uA, I _E = 0	180			V
Collector-emitter breakdown voltage *	V _{CEO}	I _C = 1.0 mA, I _B = 0	160			V
Emitter-base breakdown voltage	V _{EB0}	I _E = 10uA, I _C = 0	6			V
Collector cutoff current	I _{CB0}	V _{CB} = 120 V, I _E = 0			50	nA
Emitter cutoff current	I _{EB0}	V _{EB} = 4.0 V, I _C = 0			50	nA
DC current gain *	h _{FE}	I _C = 1.0 mA, V _{CE} = 5 V	80			
		I _C = 10 mA, V _{CE} = 5 V	100		300	
		I _C = 50 mA, V _{CE} = 5 V	50			
Collector-emitter saturation voltage *	V _{CE(sat)}	I _C = 50 mA, I _B = 5.0 mA			0.5	V
Base-emitter saturation voltage *	V _{BE(sat)}	I _C = 50 mA, I _B = 5.0 mA			1.0	V
Transiston frequency	f _T	V _{CE} =10V,I _C =10mA,f=100MHz	100			MHz

* Pulse Test: Pulse Width = 300 μs, Duty Cycle=2.0%.

■ Classification of h_{FE}(2)

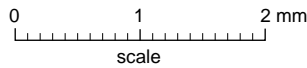
Type	MMBT5551	MMBT5551-L	MMBT5551-H
Range	100-300	100-200	200-300
Marking	G1		

■ Typical Characteristics



Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1