

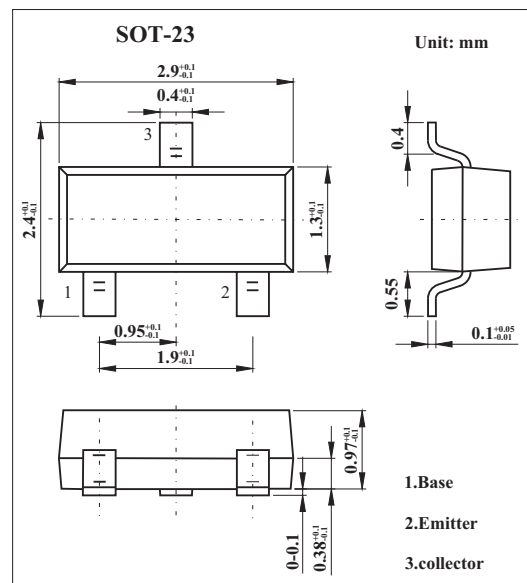
SOT-23 Plastic-Encapsulate Transistors

Features

- High Voltage Transistors
- Pb-Free Packages are Available
- NPN Transistors

MECHANICAL DATA

- Case style:SOT-23molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	180	V
Collector-emitter voltage	V _{CE0}	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

PACKAGE INFORMATION

Device	Package	Shipping
MMBT5551	SOT-23	3000/Tape&Reel

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CB0}	I _C = 100 μA, I _E = 0	180			V
Collector-emitter breakdown voltage *	V _{CE0}	I _C = 1.0 mA, I _B = 0	160			V
Emitter-base breakdown voltage	V _{EB0}	I _E = 10 μA, 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%.

Marking

Marking	G1
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RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics

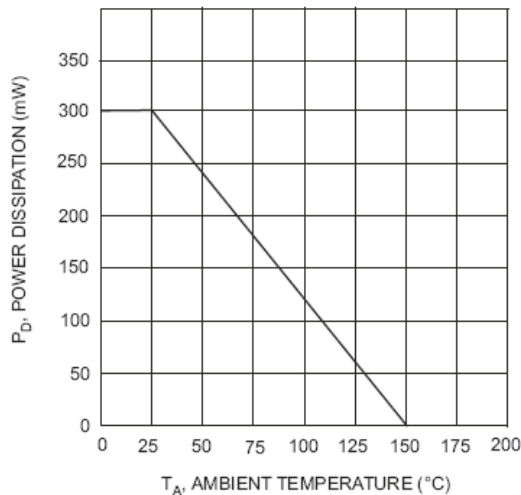


Fig.1 Max Power Dissipation vs. Ambient Temperature

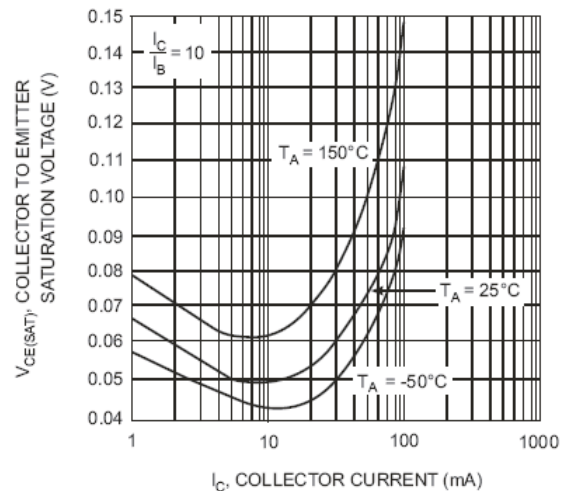


Fig.2 Collector Emitter Saturation Voltage vs. Collector Current

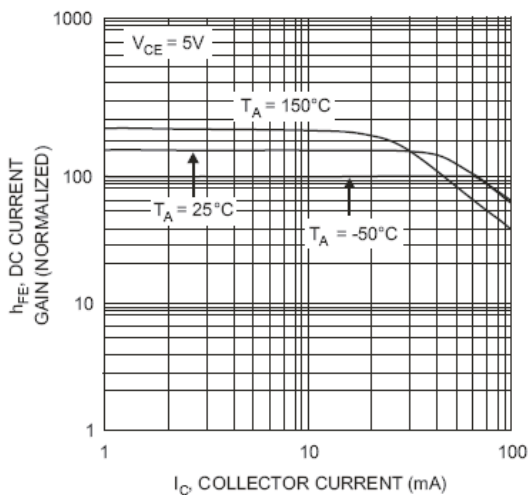


Fig.3 DC Current Gain vs. Collector Current

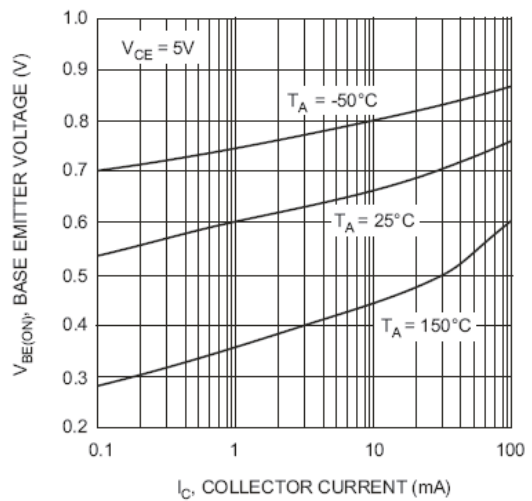


Fig.4 Base Emitter Voltage vs. Collector Current

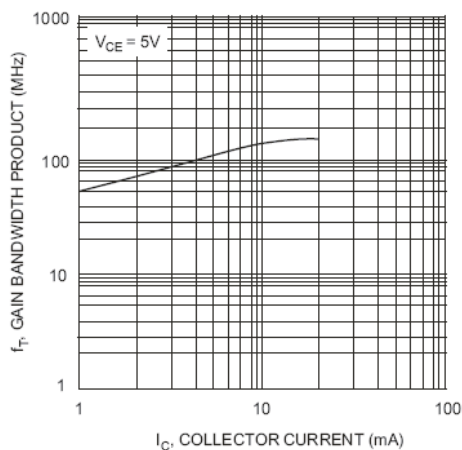


Fig.5 Gain Bandwidth Product vs. Collector Current