

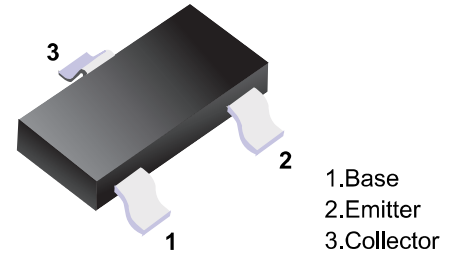
■ NPN Transistors

■ Features

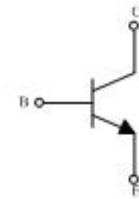
- Power switching applications

■ Marking

Marking	8D
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■ Simplified outline(SOT-23)



■ Absolute Maximum Ratings Ta = 25°C

Symbol	Parameter	Value	Units
VCBO	Collector-Base Voltage	800	V
VCEO	Collector-Emitter Voltage	500	V
VEBO	Emitter-Base Voltage	9	V
IC	Collector Current -Continuous	0.2	A
PC	Collector Power Dissipation	0.5	W
Tj	Junction Temperature	150	°C
Tstg	Storage Temperature	-55-150	°C

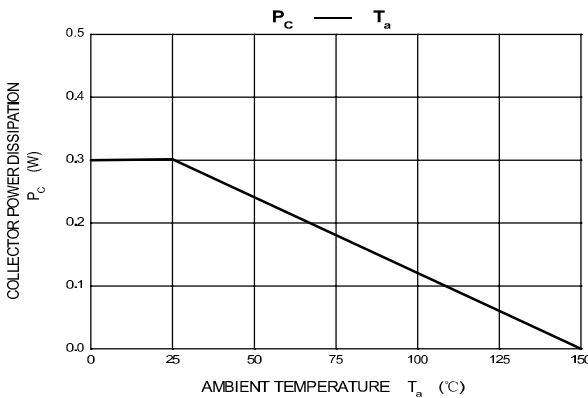
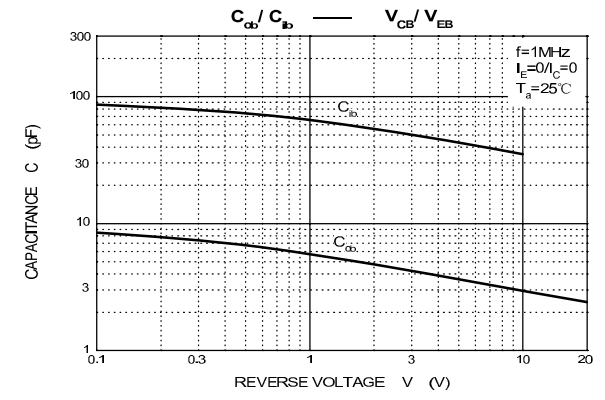
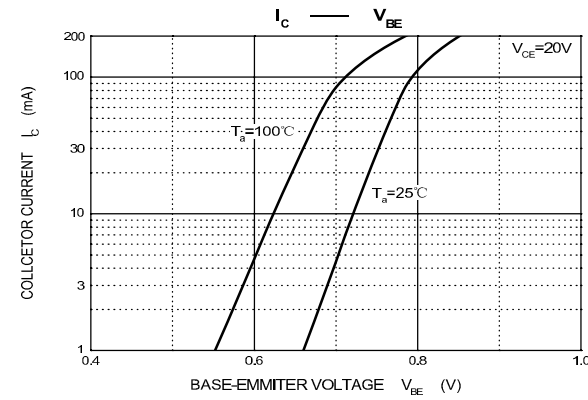
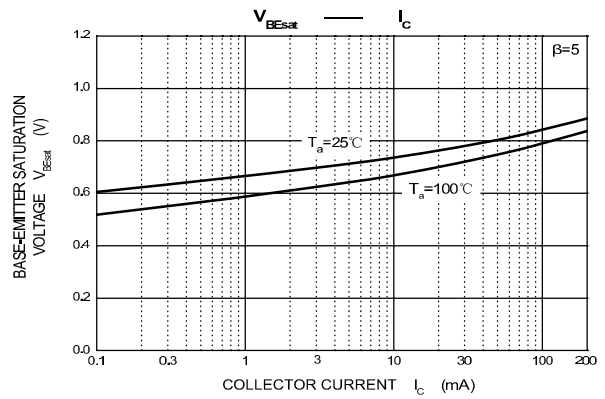
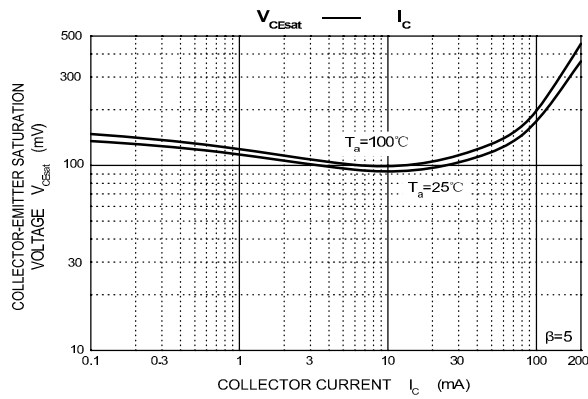
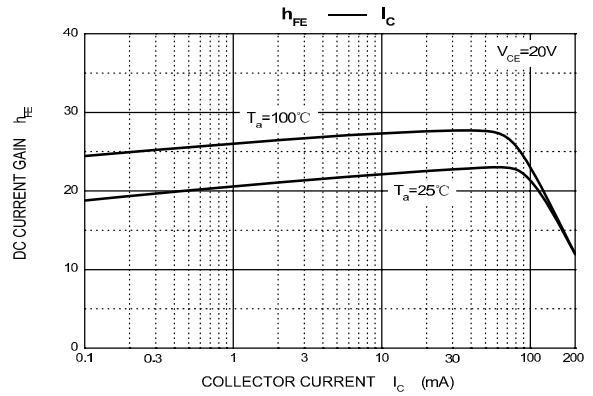
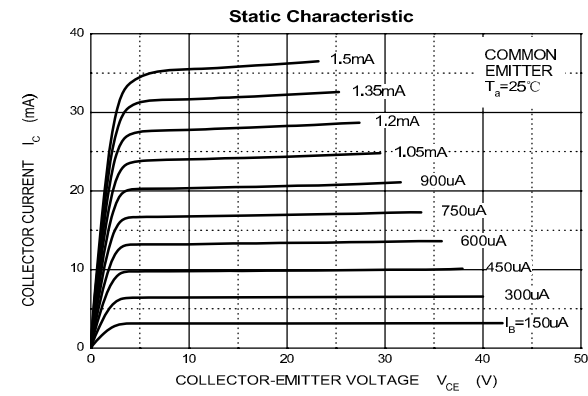
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V(BR)CBO	IC= 100μA, IE=0	800			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	500			V
Emitter-base breakdown voltage	V(BR)EBO	IE=100μA, IC=0	9			V
Collector cut-off current	ICBO	VCB=600 V , IE=0			1	μ A
Collector cut-off current	ICEO	VCE=400V , IB=0			10	μ A
Emitter cut-off current	IEBO	VEB=9V , IC=0			1	μ A
DC current gain	hFE	VCE=20V, IC= 20mA	8			
DC current gain	hFE	VCE=5V, IC= 1mA	8		30	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB= 20mA			0.5	V
Base-emitter saturation voltage	VBE(sat)	IC=100mA, IB= 20mA			1.2	V

■ Classification of hfe(1)

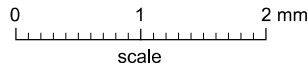
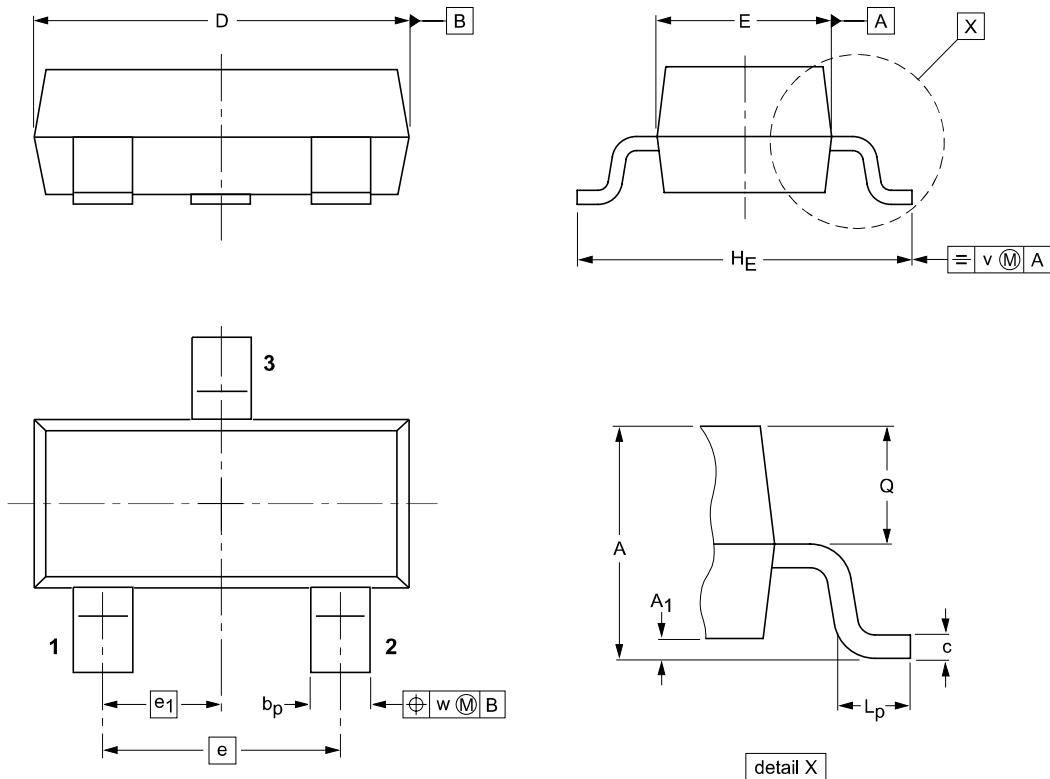
Range	8-15	15-20	20-25	25-30
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■ Typical Characteristics



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