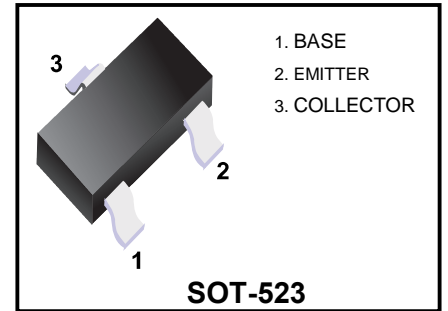


NPN Transistors



Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	50	V
Collector - Emitter Voltage	V _{CEO}	45	
Emitter - Base Voltage	V _{EB0}	6	
Collector Current - Continuous	I _c	0.1	A
Collector Power Dissipation	P _c	150	mW
Junction Temperature	T _J	150	°C
Storage Temperature range	T _{stg}	-55 to 150	

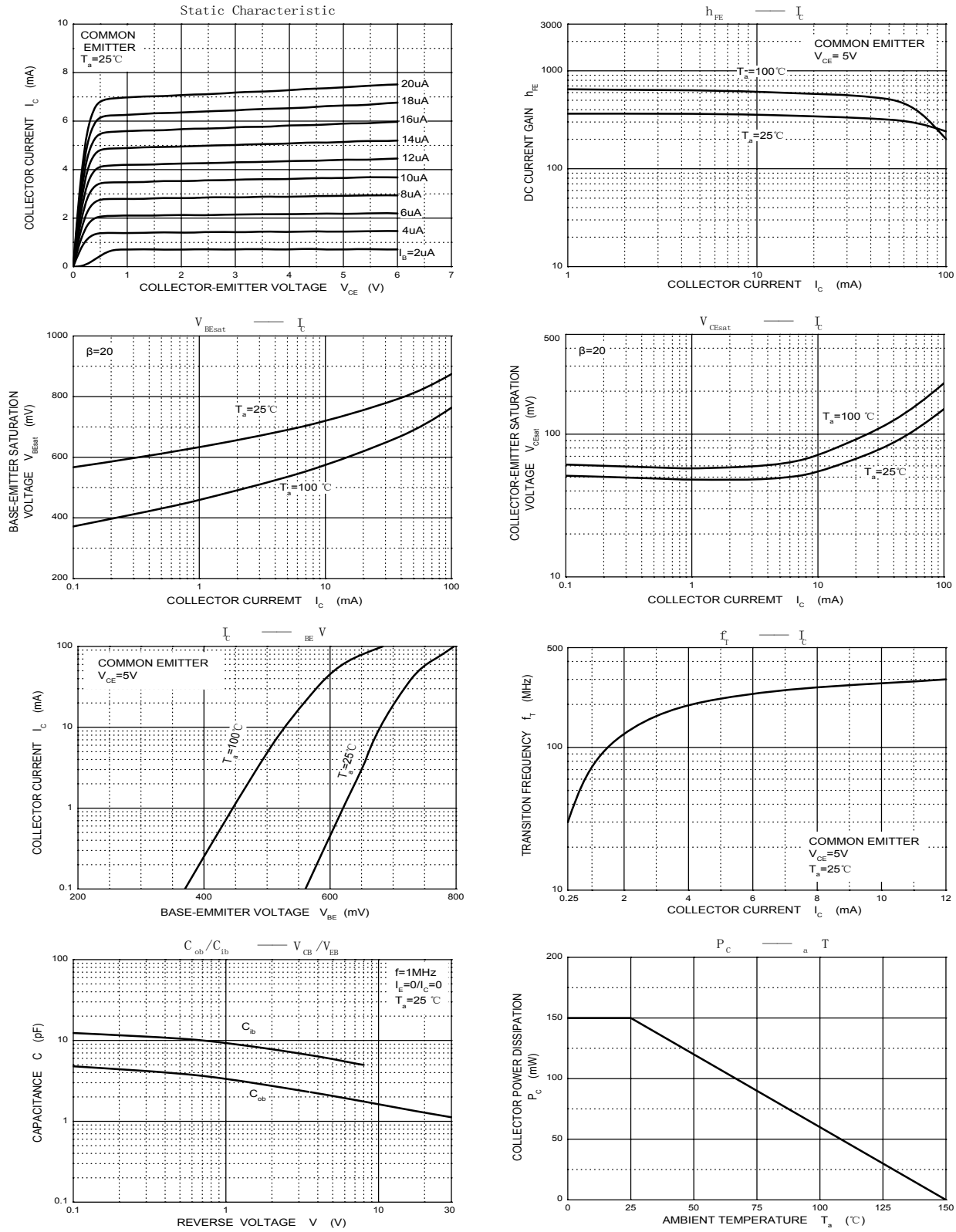
Electrical Characteristics Ta=25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E =0	50			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 10 mA, I _B =0	45			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _c =0	6			
Collector-base cut-off current	I _{CB0}	V _{CB} = 30 V, I _E =0			15	nA
Emitter cut-off current	I _{EB0}	V _{EB} = 6V, I _c =0			0.1	uA
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =10 mA, I _B =0.5mA			0.25	V
		I _c =100 mA, I _B =5mA			0.6	
Base - emitter saturation voltage	V _{BE(sat)}	I _c =10 mA, I _B =0.5mA		0.7		
		I _c =100 mA, I _B =5mA		0.9		
Base-emitter voltage	V _{BE(on)}	V _{CE} = 5V, I _c = 2mA	0.58		0.7	
		V _{CE} = 5V, I _c = 10mA			0.77	
DC current gain	h _{FE}	V _{CE} = 5V, I _c = 2mA	200		450	
Noise figure	NF	V _{CE} =5V, f=1MHz, I _c =0.2mA R _s =2KΩ, BW=200HZ			10	dB
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=1MHz			4.5	pF
Transition frequency	f _T	V _{CE} = 5 V, I _c =10mA, f=100MHz	100			MHz

h_{FE} Classification

Type	S9014T
Range	200-450
Marking	1F

Typical Characteristics



Ordering information

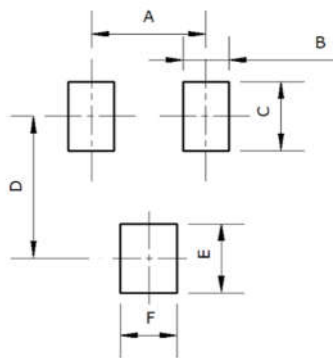
Package	Packing Description	Base Quantity	Packing Quantity
SOT-523	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-523

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.50	1.70	59	67
B	0.75	0.85	30	33
C	1.45	1.75	57	69
D	0.50TYP		0.020TYP	
E	0.90	1.10	35	43
G	0.00	0.10	0	4
H	0.60	0.80	24	31
J	0.10	0.20	4	8
K	0.15	0.35	6	14
L	0.26	0.46	10	18

The recommended mounting pad size



Millimeter (mm)	
Dim.	TYP
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

Disclaimer

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