

FEATURES

- | High transition frequency

- | Small $r_{bb'} \cdot C_c$ and high gain

- | Small NF

MECHANICAL DATA

- | SOT-723 small outline plastic package

- | Epoxy UL: 94V-0

- | Mounting position: Any

APPROVALS

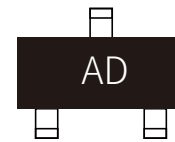
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

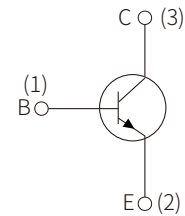
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	
Emitter-Base Voltage	V_{EBO}	5	
Collector Current-Continuous	I_C	50	mA
Power Dissipation	P_D	400	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$



SOT-723



Marking



Schematic Symbol

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =100μA, I _E =0	35			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA, I _B =0	25			
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =100μA, I _C =0	5.5			
Collector-Base cut-off current	I _{CBO}	V _{CB} =15V, I _E =0			50	nA
Emitter-Base cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			100	
Collector-Emitter cut-off current	I _{CEO}	V _{CE} =15V, I _B =0			5	μA
DC Current Gain	h _{FE(1)}	V _{CE} =5V, I _C =1mA	70		200	
	h _{FE(2)}	V _{CE} =5V, I _C =0.1mA				
	h _{FE(3)}	V _{CE} =5V, I _C =1mA				
Current Gain Ratio	h _{FE2} /h _{FE3}	I _C =500mA, I _B =50mA	80%			
Current gain-bandwidth product	f _T	V _{CE} =5V, I _C =5mA, f _t =400MHz	700			MHz
Collector-Emitter Saturation Voltage	V _{CEsat}	I _C =10mA, I _B =1mA			0.5	V
Output capacitance	C _{ob}	V _{CB} =10V, I _E =0A f=1MHz		0.8	1.5	pF
Collector-base Time Constant	C _c · r _{bb} '	V _{CB} =10V, I _C =10mA f=31.8MHz		4	12	ps
Noise figure	N _F	V _{CB} =6V, I _C =2mA f=500MHz, R _g =50Ω		3.5		dB

TYPICAL CHARACTERISTICS

Fig.1-Ground Emitter Propagation Characteristics

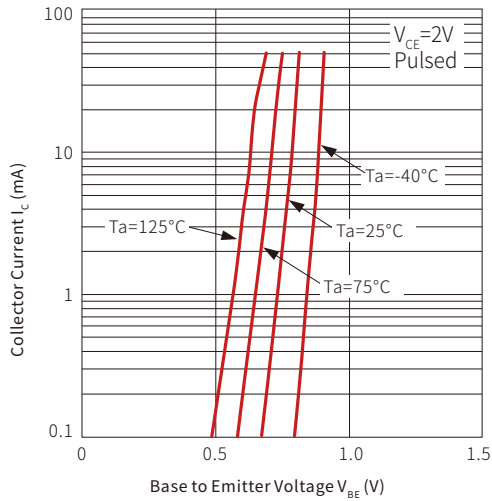


Fig.2-Typical Output Characteristics

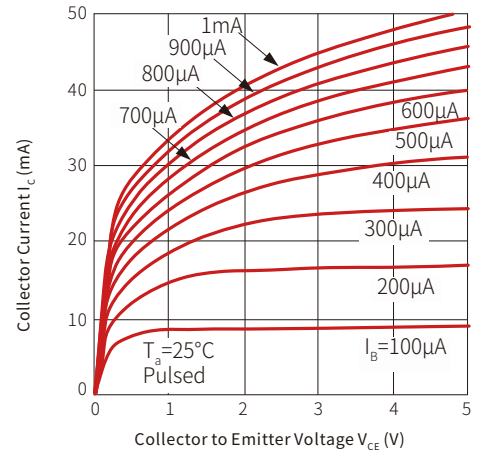


Fig.3 DC Current Gain vs. Collector Current (I)

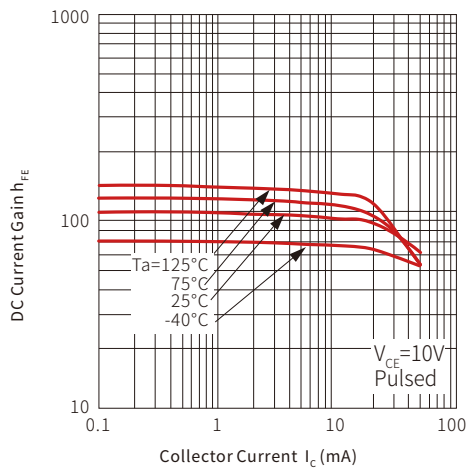


Fig.4 DC Current Gain vs. Collector Current (II)

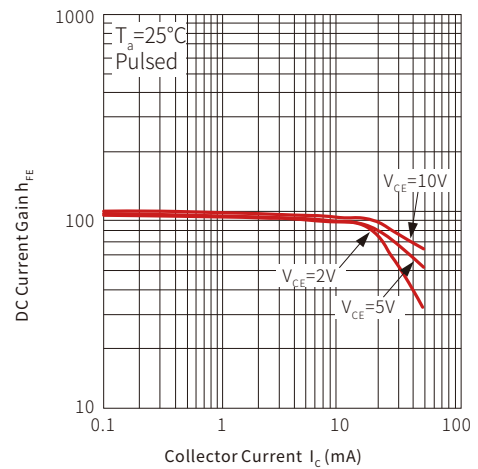


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

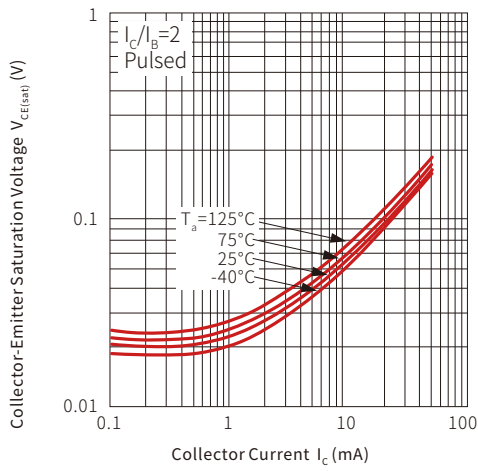


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

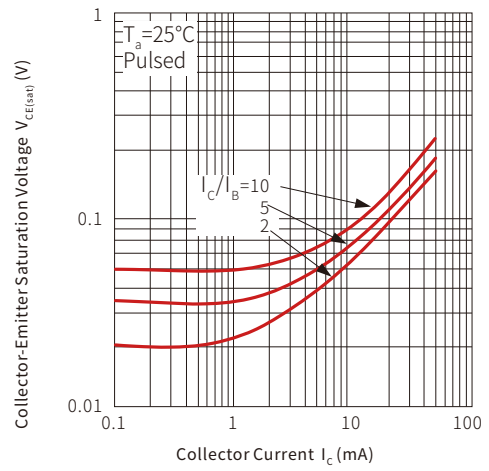


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

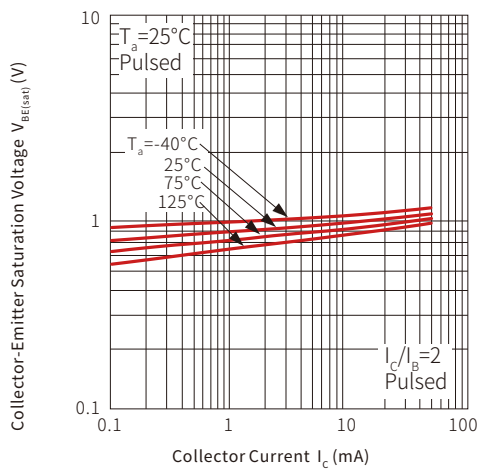


Fig.8 Capacitance vs. Reverse Bias Voltage

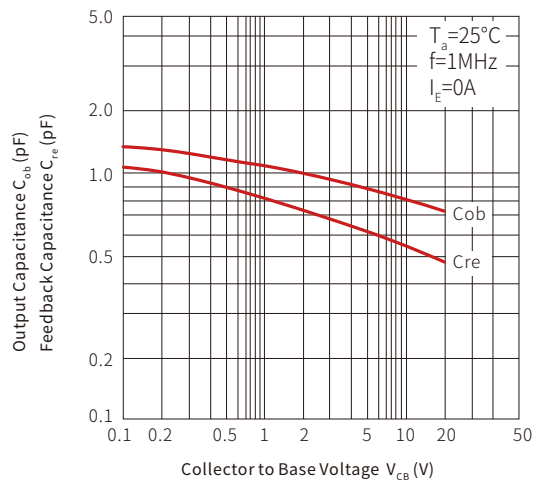
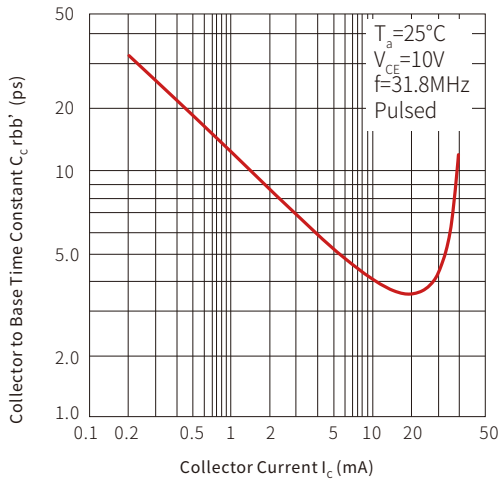
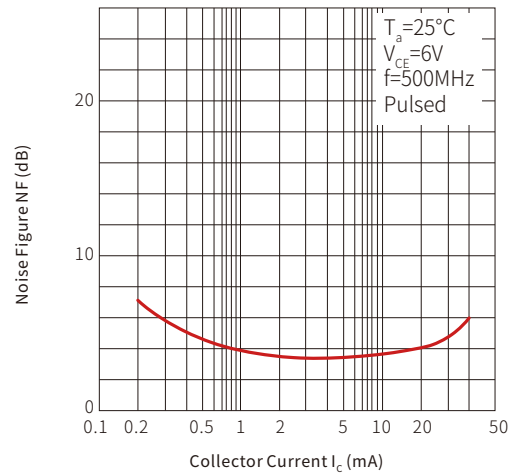
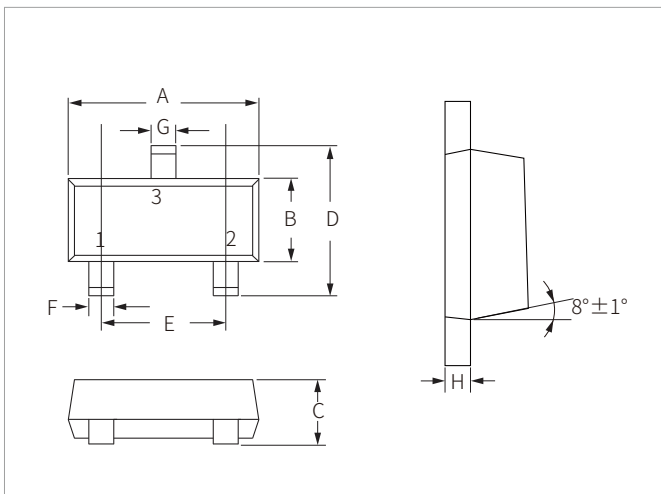


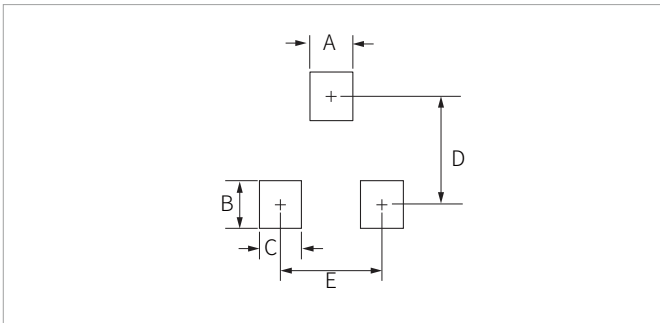
Fig.9 Collector to base time constant vs. collector current

Fig.10 Noise factor vs. collector current characteristics


SOT-723 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.15	1.35	0.045	0.053
B	0.75	0.85	0.030	0.033
C	0.35	0.45	0.014	0.018
D	1.15	1.35	0.045	0.053
E	0.80TYP		0.031TYP	
F	0.175	0.25	0.007	0.010
G	0.225	0.30	0.009	0.012
H	0.09	0.13	0.003	0.005

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Dimensions	Dimensions
A	0.50	0.020
B	0.45	0.018
C	0.40	0.016
D	1.15	0.045
E	0.80	0.031

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
2SC5662	SOT-723	8000PCS	7"

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By QR Code

Website



Wechat

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