Ordering number:ENN4668

PNP Epitaxial Planar Silicon Transistor

2SA1723

High-Frequency Amplifier, Medium-Power Amplifier Applications

Applications

· Wideband amplifiers.
· High-frequency drivers.

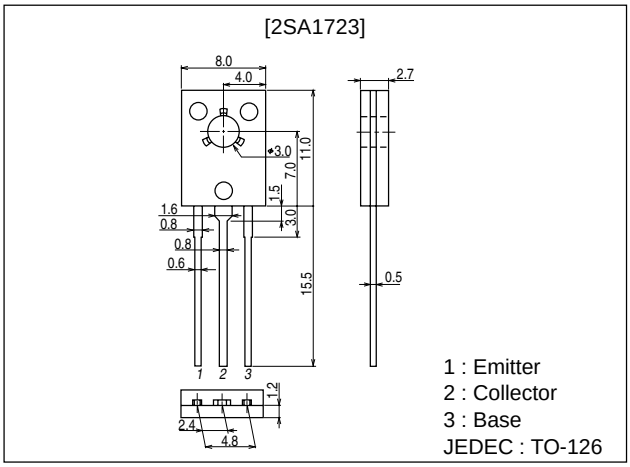
Features

· High f_T (f_T=1.5GHz typ).
· High current (I_C=300mA).
· Adoption of FBET process.

Package Dimensions

unit:mm

2009B



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–30	V
Collector-to-Emitter Voltage	V_{CEO}		–20	V
Emitter-to-Base Voltage	V_{EBO}		–3	V
Collector Current	I_C		–300	mA
Collector Current (Pulse)	I_{CP}		–600	mA
Collector Dissipation	P_C		1.2	W
		Tc=25˚C	5	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=–20V, I_E=0			–0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–2V, I_C=0			–1.0	μA
DC Current Gain	$h_{FE}1$	V_{CE}=–5V, I_C=–50mA	15		100	
	$h_{FE}2$	V_{CE}=–5V, I_C=–300mA	5			
Gain-Bandwidth Product	f_T	V_{CE}=–5V, I_C=–100mA		1.5		GHz
Output Capacitance	C_{ob}	V_{CB}=–10V, f=1MHz		5.8		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=–10V, f=1MHz		5.0		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=–100mA, I_B=–10mA		–0.4	–1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=–100mA, I_B=–10mA		–0.9	–1.2	V

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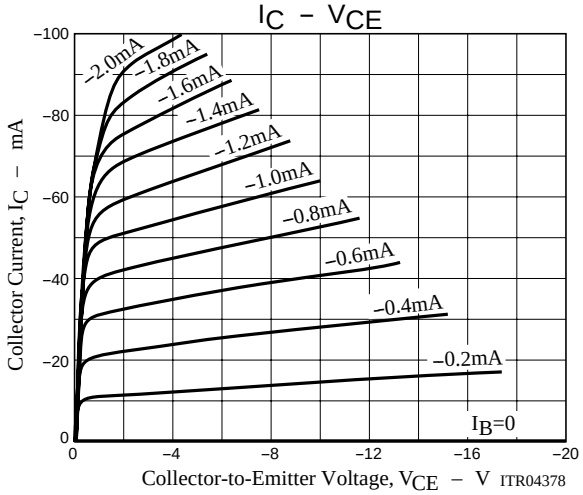
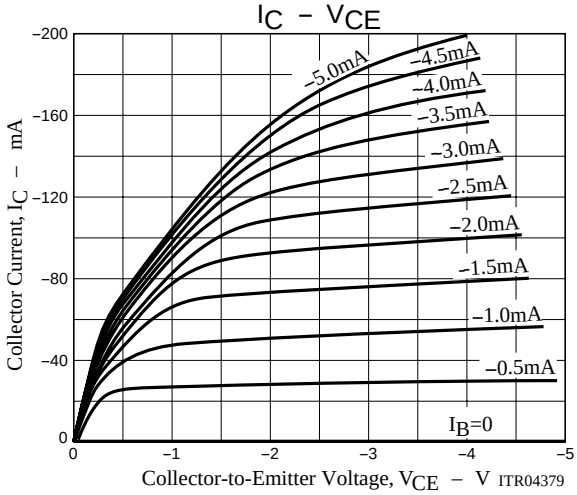
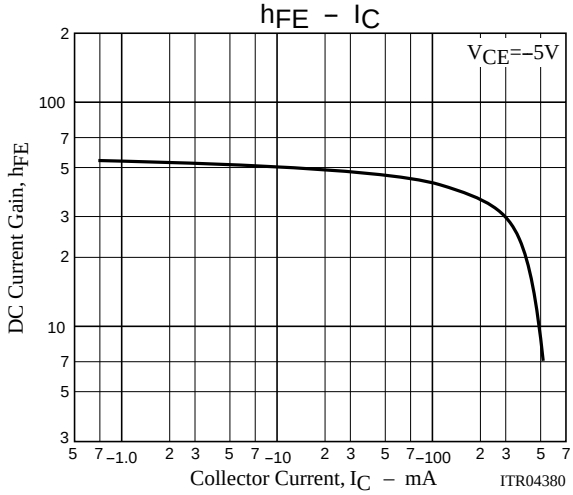
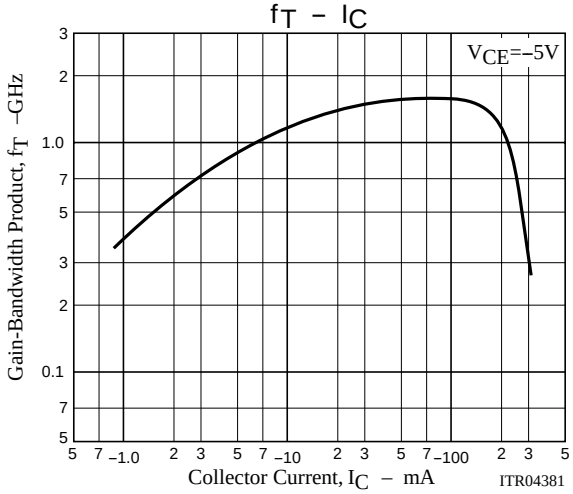
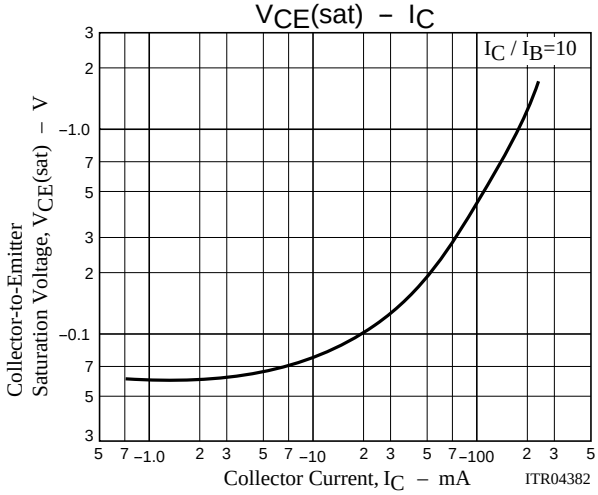
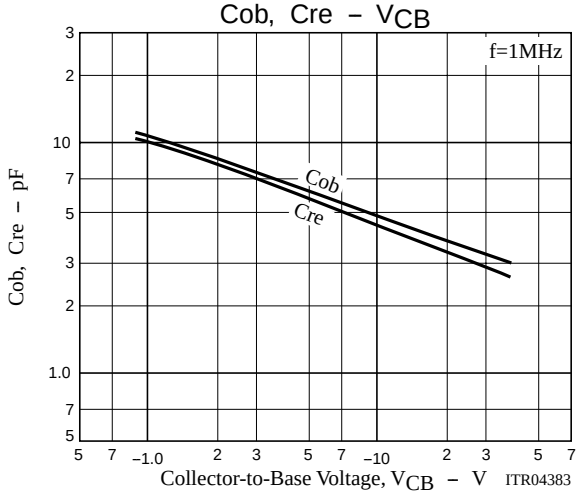

IC – VCE
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
ITR04378
–2.0mA
–1.8mA
–1.6mA
–1.4mA
–1.2mA
–1.0mA
–0.8mA
–0.6mA
–0.4mA
–0.2mA
IB=0

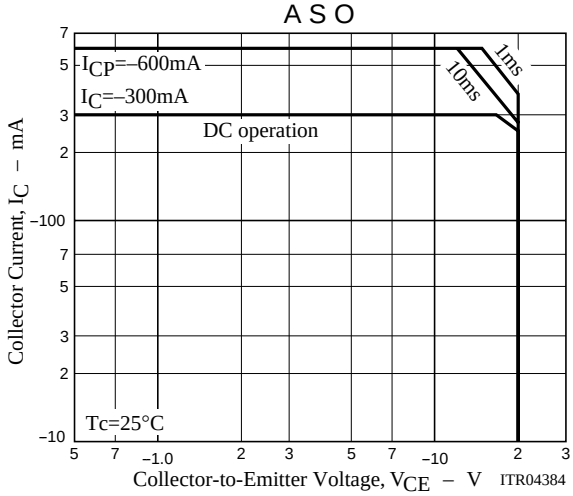

IC – VCE
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
ITR04379
–5.0mA
–4.5mA
–4.0mA
–3.5mA
–3.0mA
–2.5mA
–2.0mA
–1.5mA
–1.0mA
–0.5mA
IB=0

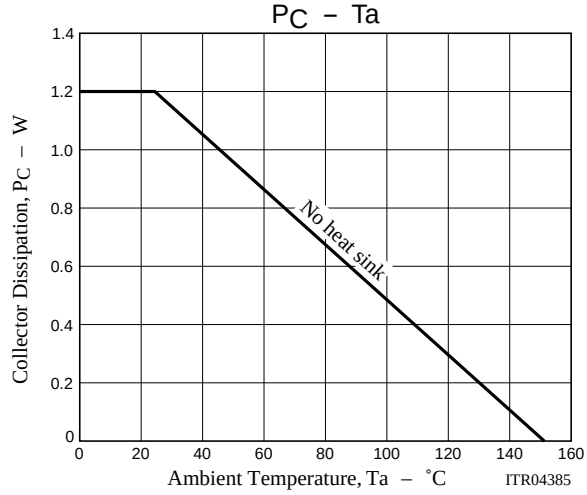

hFE – IC
DC Current Gain, hFE
Collector Current, IC – mA
ITR04380
VCE=–5V


fT – IC
Gain-Bandwidth Product, fT – GHz
Collector Current, IC – mA
ITR04381
VCE=–5V


VCE(sat) – IC
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
ITR04382
IC / IB=10


Cob, Cre – VCB
Cob, Cre – pF
Collector-to-Base Voltage, VCB – V
ITR04383
f=1MHz
Cob
Cre


A S O
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
ITR04384
ICP=–600mA
IC=–300mA
DC operation
1ms
10ms
Tc=25°C


PC – Ta
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
ITR04385
No heat sink