

**2SA1723**

## High-Frequency Amplifier, Medium-Power Amplifier Applications

### Applications

- Wideband amplifiers.
- High-frequency drivers.

### Features

- High  $f_T$  ( $f_T=1.5\text{GHz}$  typ).
- High current ( $I_C=300\text{mA}$ ).
- Adoption of FBET process.

### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		-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
		$T_c=25^\circ\text{C}$	5	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-20\text{V}, I_E=0$			-0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-2\text{V}, I_C=0$			-1.0	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE}=-5\text{V}, I_C=50\text{mA}$	15		100	
	$h_{FE2}$	$V_{CE}=-5\text{V}, I_C=300\text{mA}$	5			
Gain-Bandwidth Product	$f_T$	$V_{CE}=-5\text{V}, I_C=100\text{mA}$		1.5		GHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, f=1\text{MHz}$		5.8		pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=-10\text{V}, f=1\text{MHz}$		5.0		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$	-0.4		-1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$	-0.9		-1.2	V

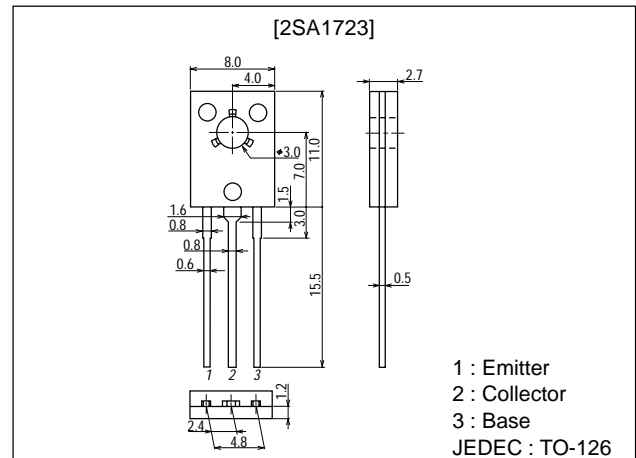
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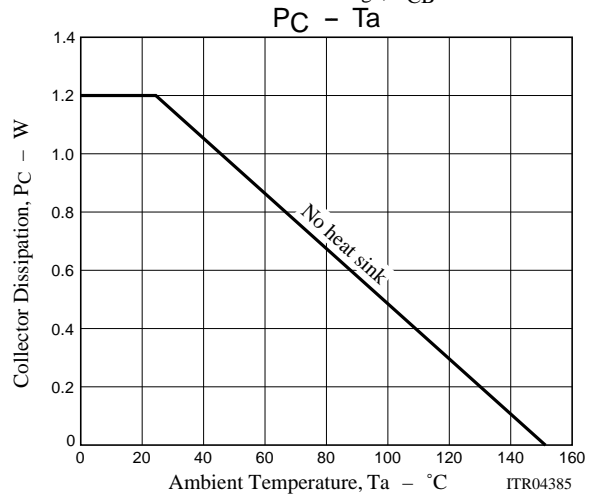
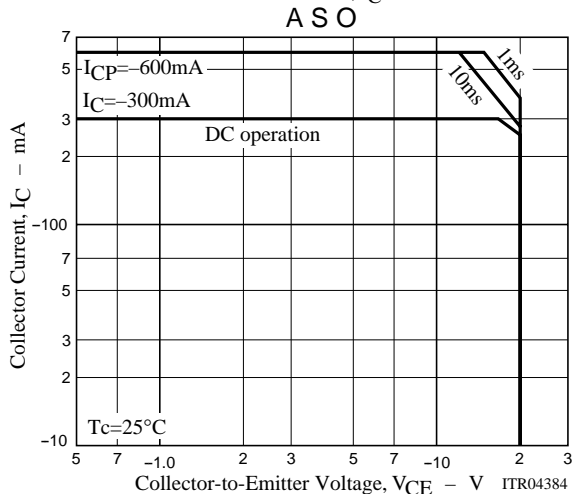
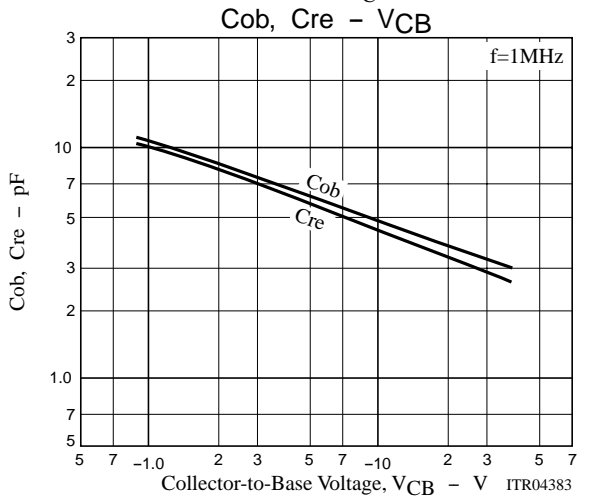
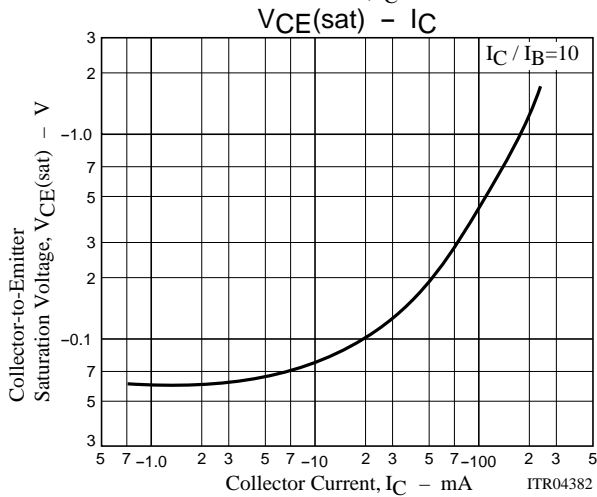
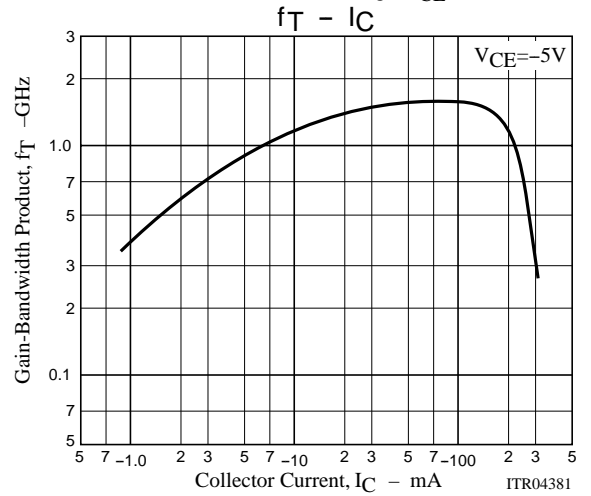
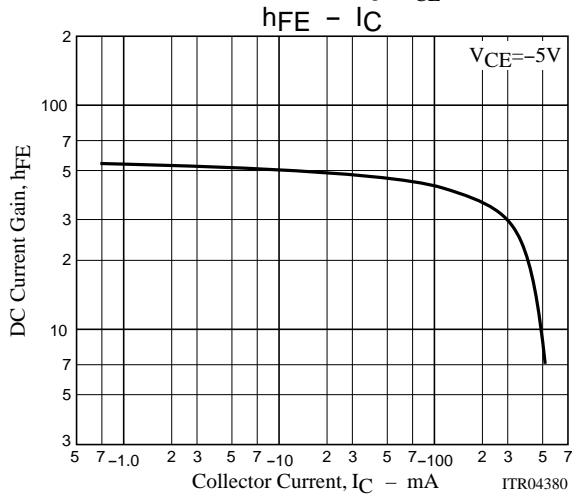
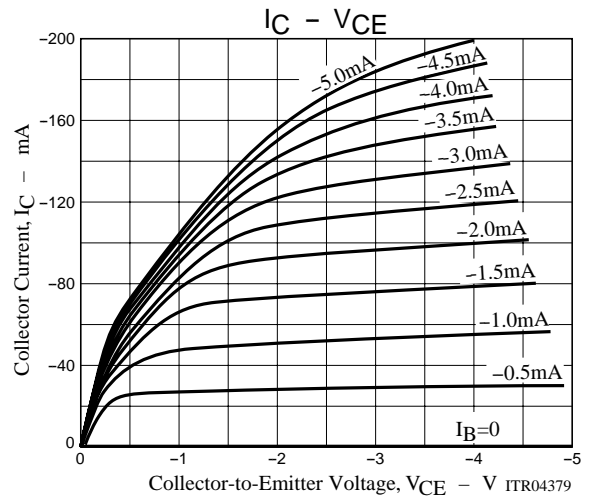
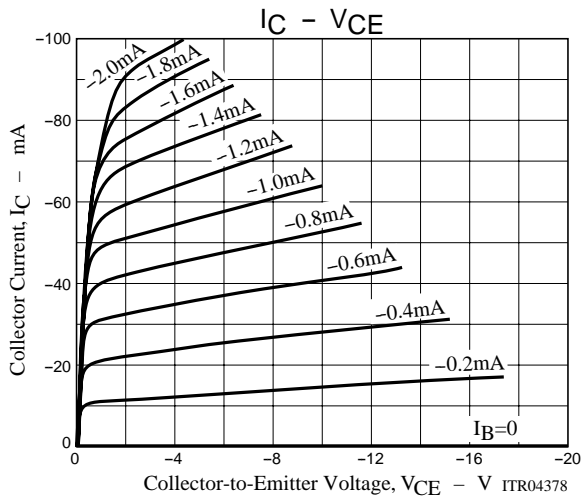
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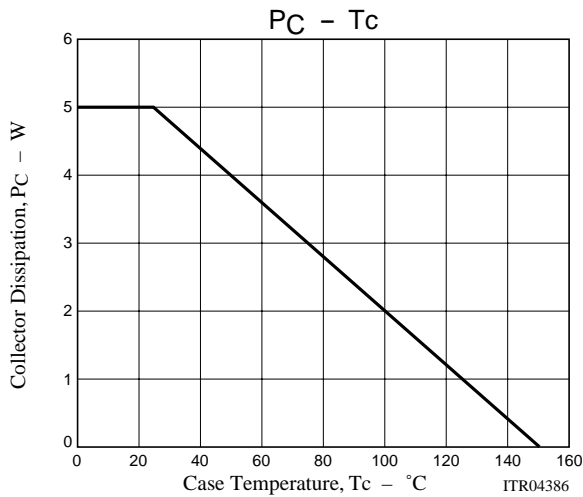
### Package Dimensions

unit:mm

2009B







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