



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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-2\text{V}, I_C=0$			-1.0	μA
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

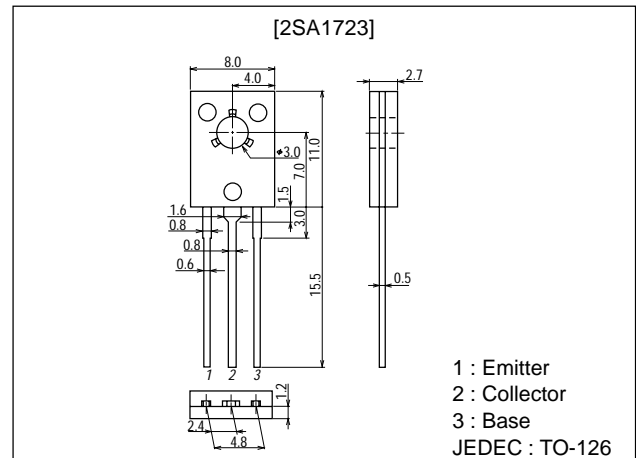
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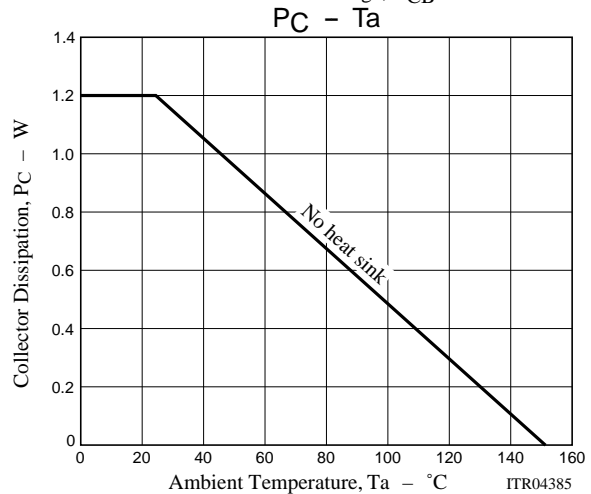
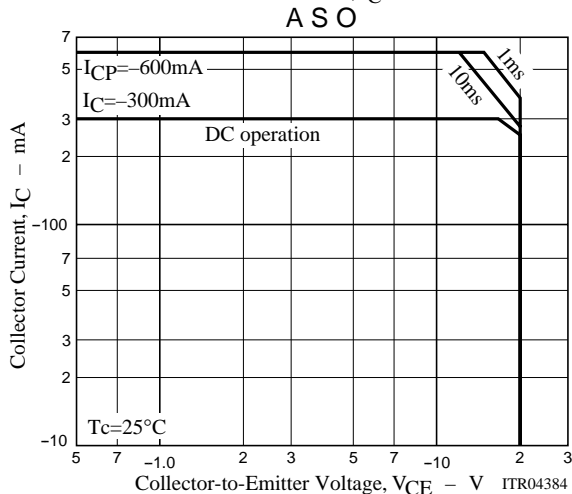
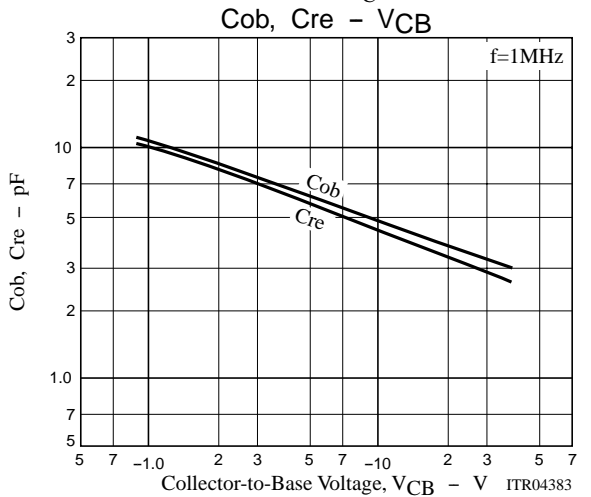
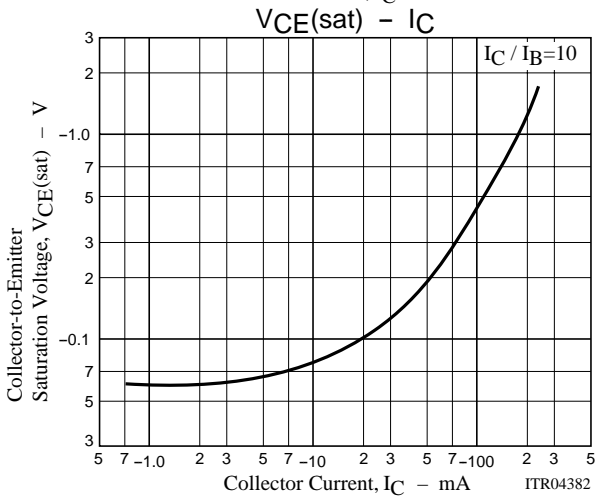
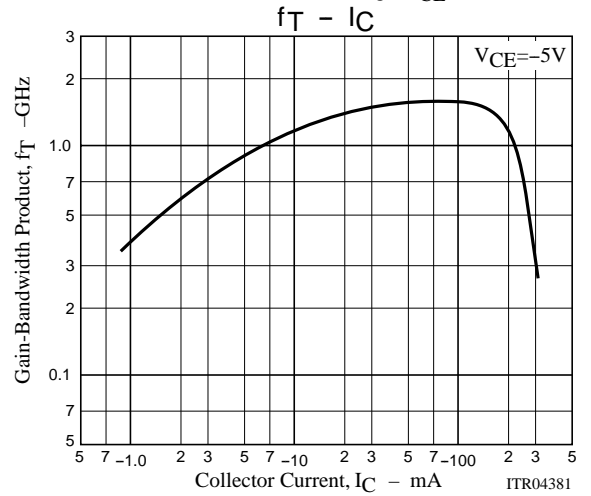
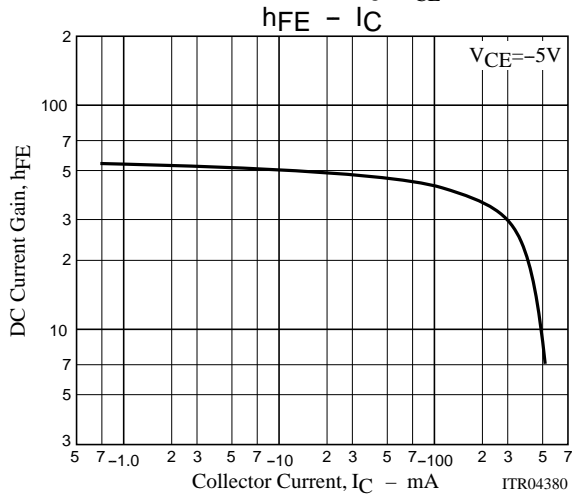
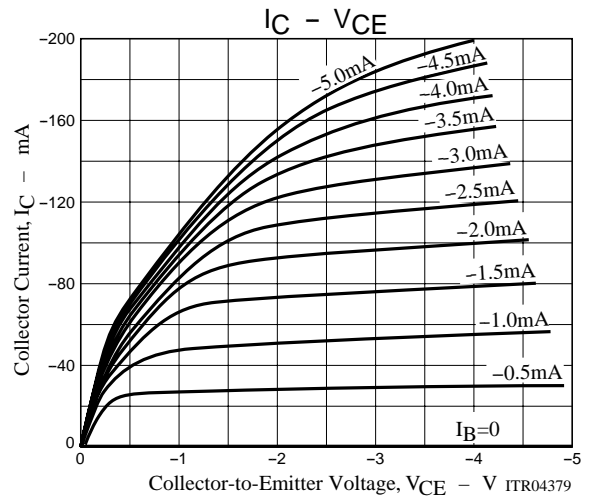
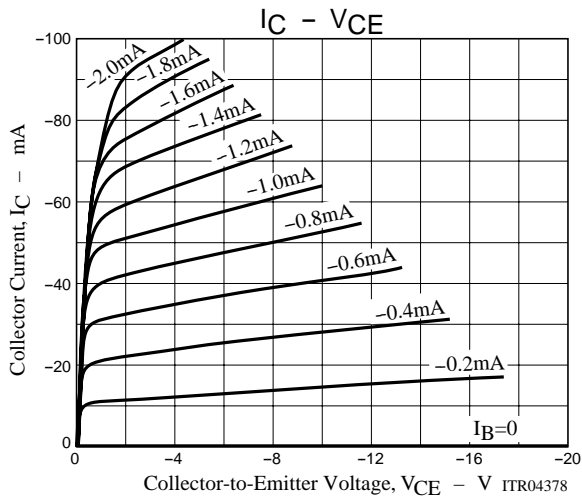
Package Dimensions

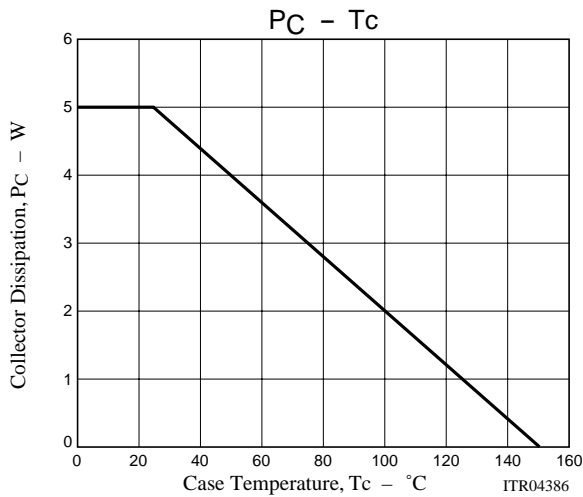
unit:mm

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