



CPH6010 — NPN Epitaxial Planar Silicon Transistor

High Frequency Output Applications High Speed Switching Applications

Features

- High f_T .
- Large current ($I_C=600\text{mA}$).
- Complementary pair with the CPH6009 (PNP).

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		13	V
Collector-to-Emitter Voltage	V_{CEO}		13	V
Emitter-to-Base Voltage	V_{EBO}		3	V
Collector Current	I_C		600	mA
Collector Dissipation	P_C	Mounted on a ceramic board (900mm ² X0.8mm)	1.0	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}	$V_{CB}=10\text{V}, I_E=0\text{A}$			3.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1\text{V}, I_C=0\text{A}$			3.0	μA
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	40		100	
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=100\text{mA}$		4		GHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, f=1\text{MHz}$		6.6	8.0	pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=10\text{V}, f=1\text{MHz}$		3.4		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=300\text{mA}, I_B=30\text{mA}$		0.4	0.8	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0\text{A}$	13			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	13			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0\text{A}$	3			V

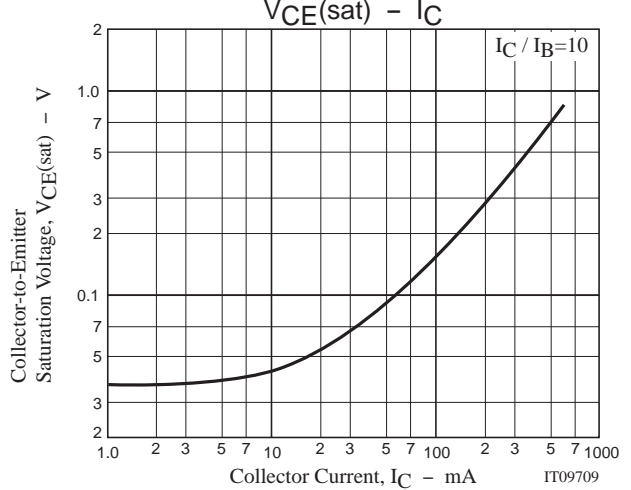
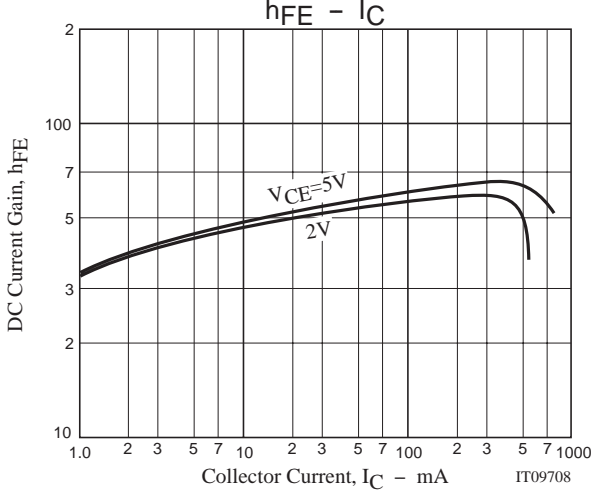
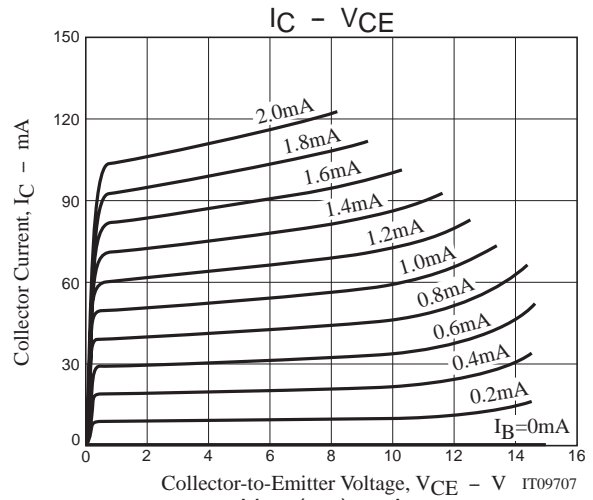
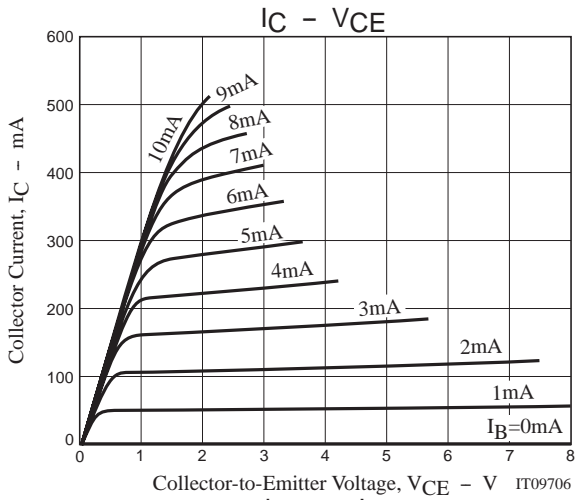
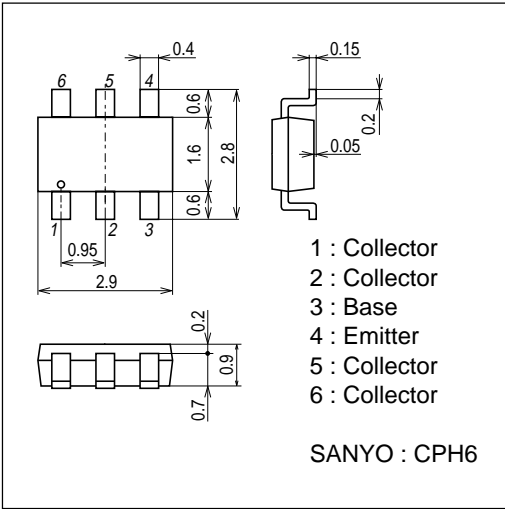
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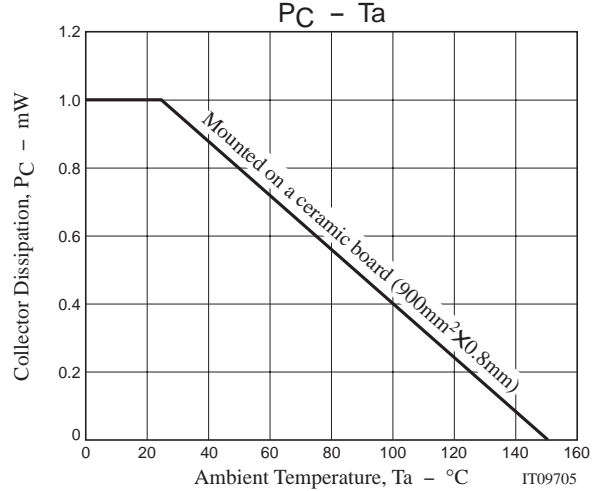
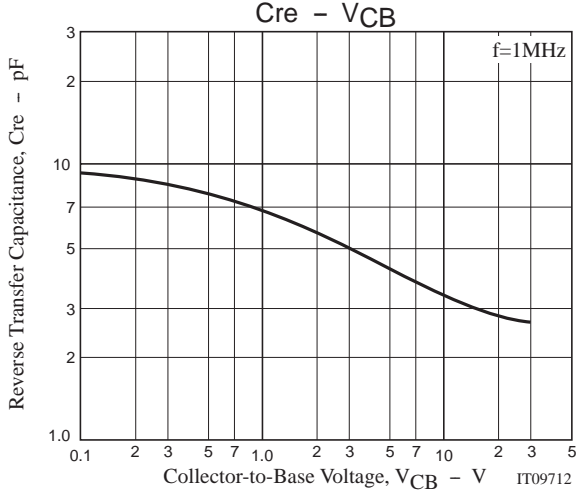
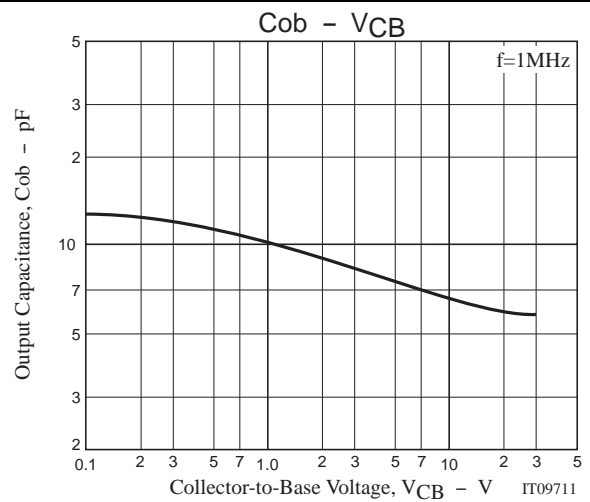
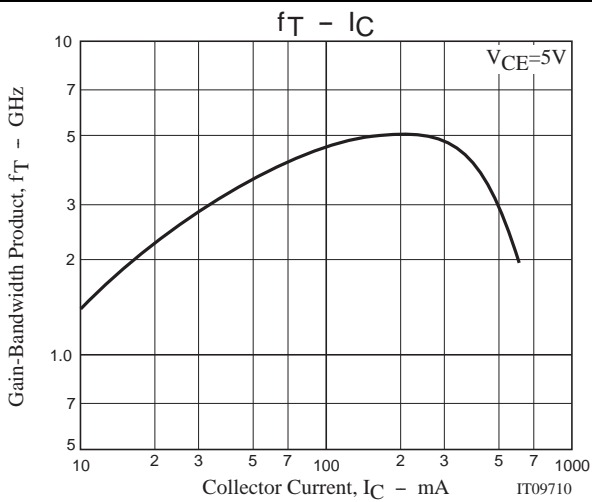
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Package Dimensions

unit : mm
7018-002





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