

**CPH6006**

Video Output Driver, High-Frequency Amplifier Applications

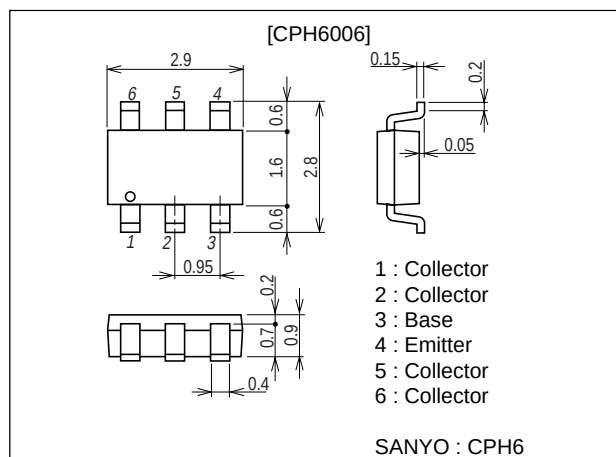
Features

- High f_T ($f_T=2.2\text{GHz}$ typ).
- Large current ($I_C=300\text{mA}$).
- Adoption of FBET process.

Package Dimensions

unit : mm

2146A



Specifications

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

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	Mounted on a ceramic board (600mm ² ×0.8mm)	1.0	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°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}	$V_{EB}=2\text{V}$, $I_C=0$			5.0	μA
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5\text{V}$, $I_C=50\text{mA}$	100		200	
	$h_{FE}(2)$	$V_{CE}=5\text{V}$, $I_C=300\text{mA}$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}$, $I_C=50\text{mA}$		2.2		GHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $f=1\text{MHz}$		2.9		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=10\text{V}$, $f=1\text{MHz}$		2.6		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$		0.15	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$		0.9	1.2	V

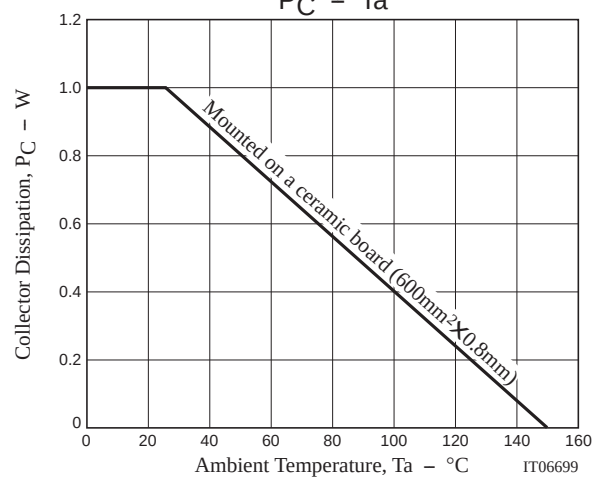
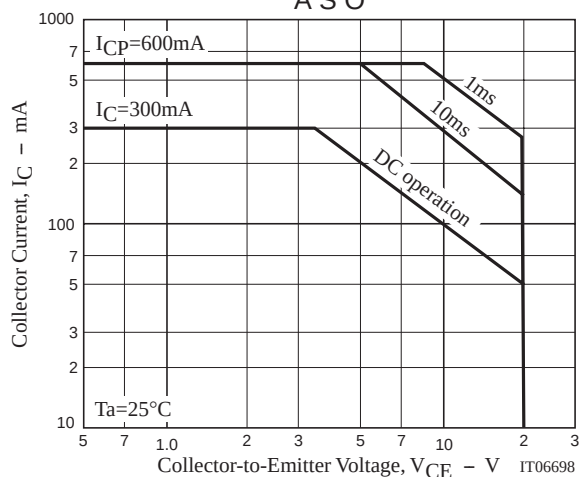
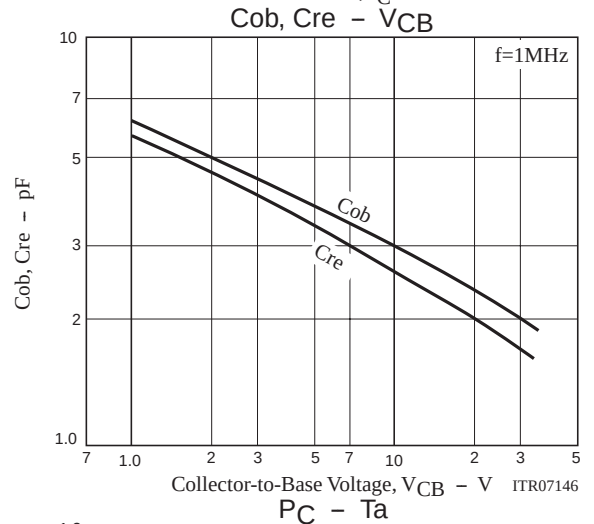
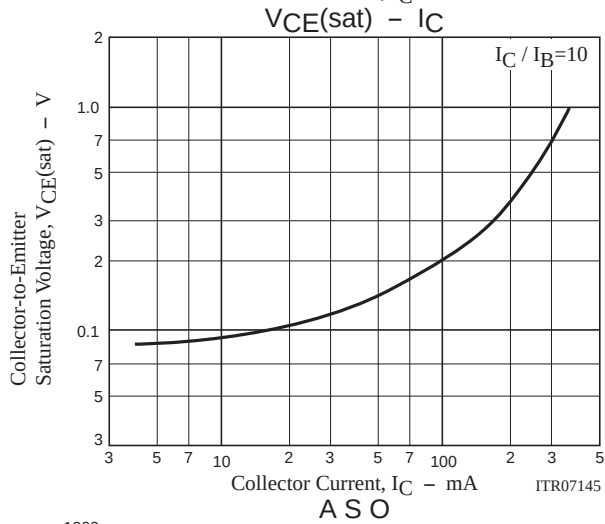
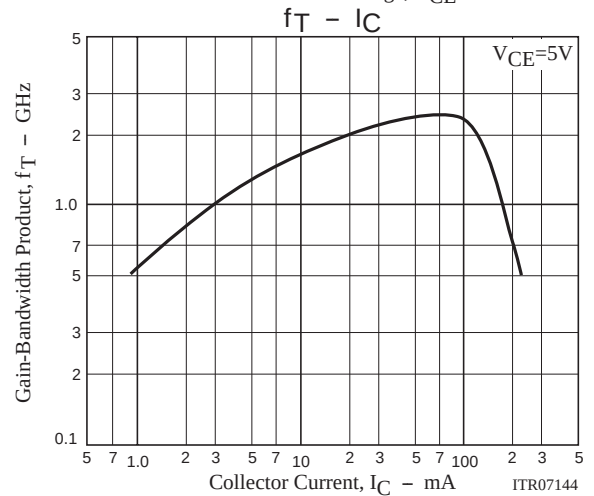
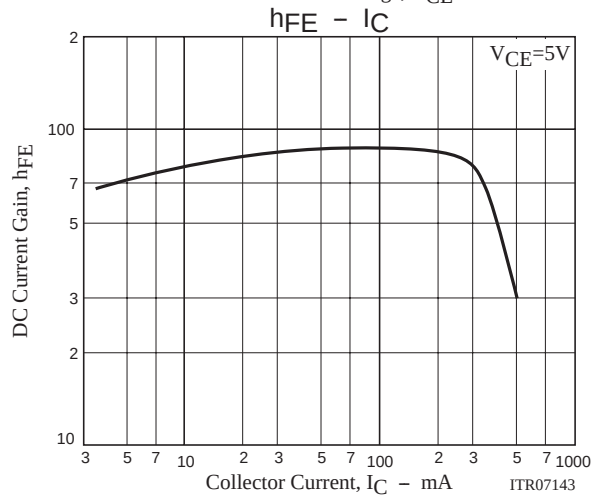
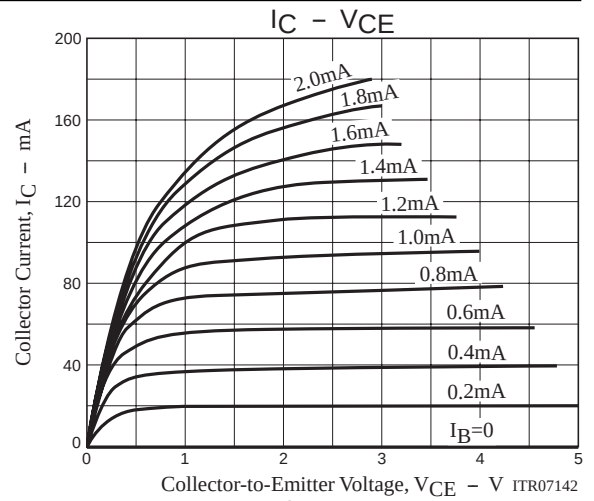
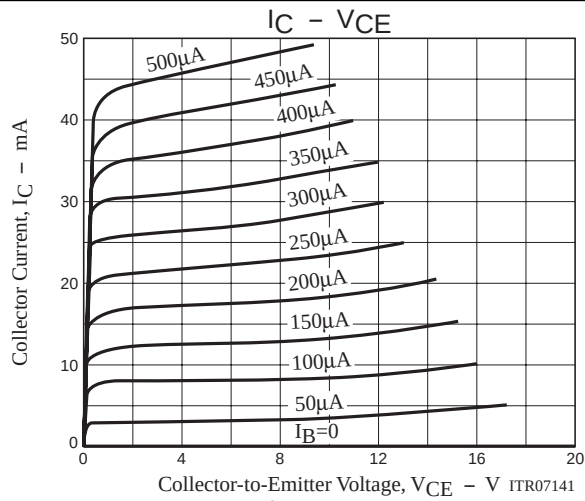
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