

**CPH6006**

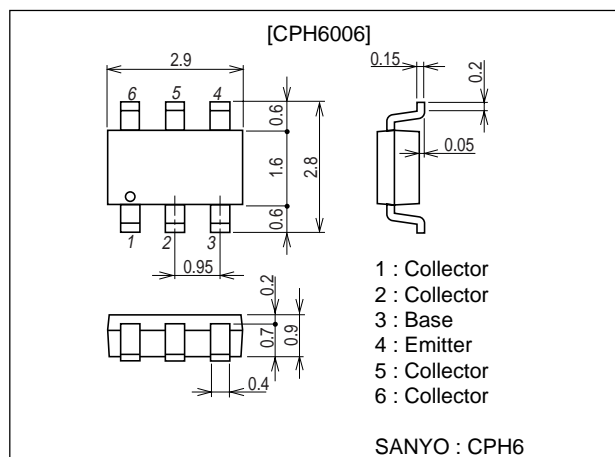
## Video Output Driver, High-Frequency Amplifier Applications

### 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 <sup>2</sup> 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  $T_a=25^\circ\text{C}$ 

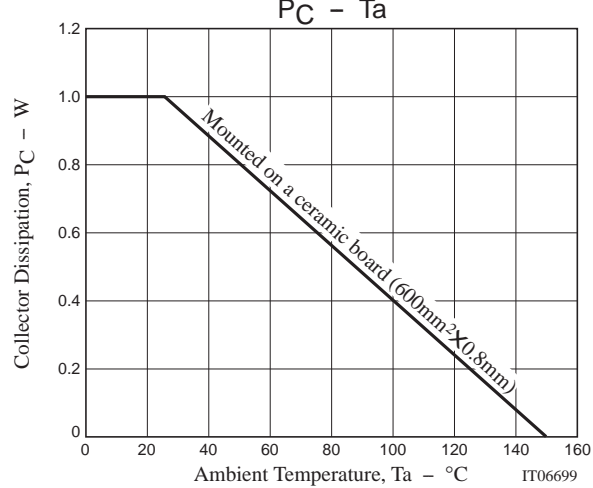
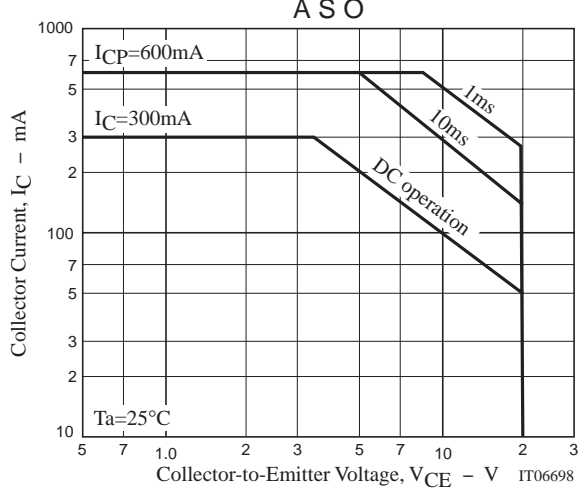
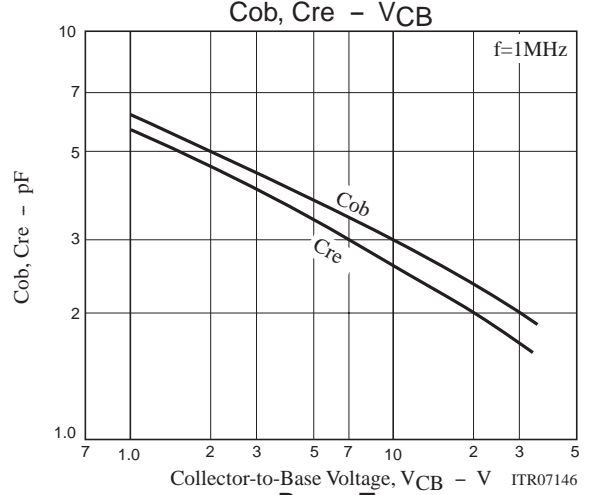
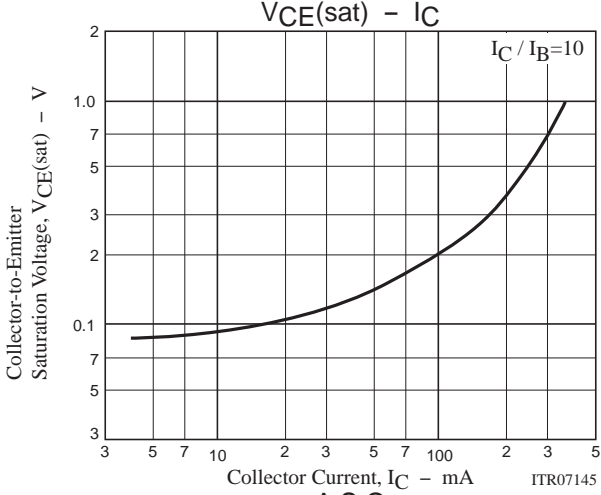
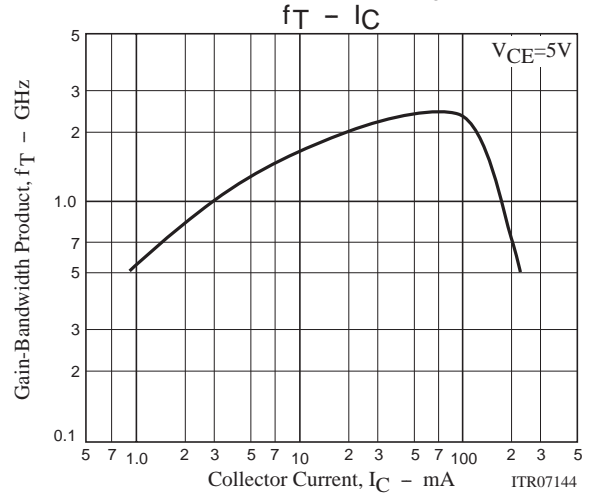
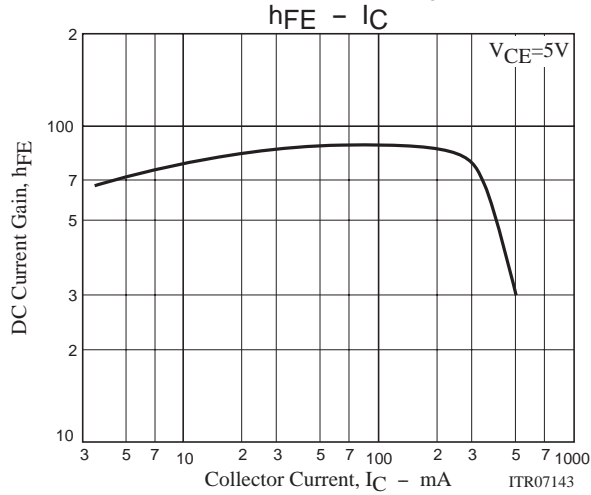
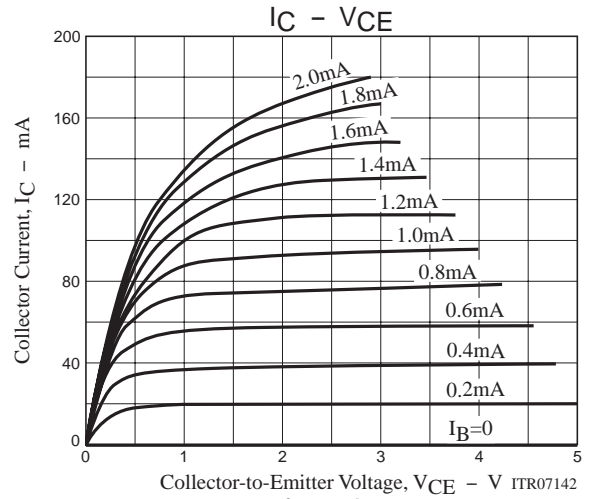
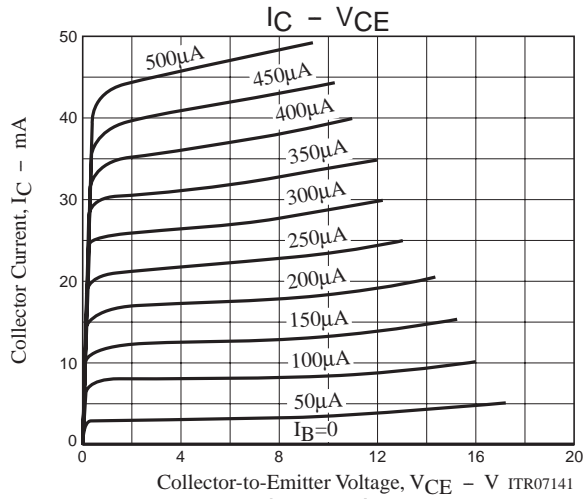
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=2\text{V}$ , $I_C=0$			5.0	$\mu\text{A}$
DC Current Gain	$h_{FE}(1)$	$V_{CE}=5\text{V}$ , $I_C=50\text{mA}$	100		200	
	$h_{FE}(2)$	$V_{CE}=5\text{V}$ , $I_C=300\text{mA}$	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

Marking : GF

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TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN



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