



CPH3104/3204

DC/DC Converter Applications

Applications

- Relay drivers, lamp drivers, motor drivers, strobes.

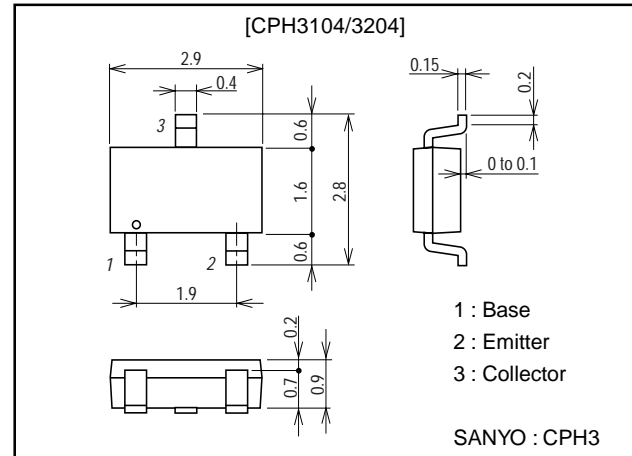
Features

- Adoption of FBET and MBIT processes.
- High current capacitance.
- Low collector-to-emitter saturation voltage.
- Ultrasmall-sized package permitting applied sets to be made small and slim (0.9mm).
- High allowable power dissipation.

Package Dimensions

unit:mm

2150



() : CPH3104

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)15	V
Collector-to-Emitter Voltage	V_{CEO}		(-)15	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)1.5	A
Collector Current (Pulse)	I_{CP}		(-)3	A
Base Current	I_B		(-)200	mA
Collector Dissipation	P_C	Mounted on a ceramic board (600mm ² ×0.8mm)	0.9	W
Junction Temperature	T_J		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)12V, I_E=0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0$			(-)100	nA
DC Current Gain	h_{FE1}	$V_{CE}=(-)2V, I_C=(-)50mA$	200		560	
	h_{FE2}	$V_{CE}=(-)2V, I_C=(-)800mA$	80			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)2V, I_C=(-)50mA$		(300)		MHz
				200		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(15)10		pF

Marking : CPH3104 : AD, CPH3204 : CD

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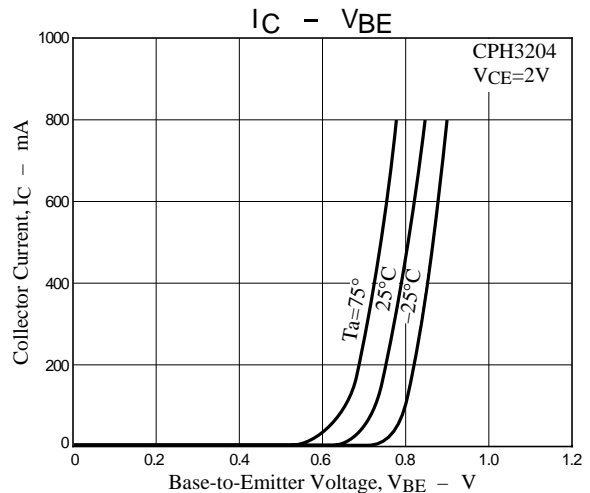
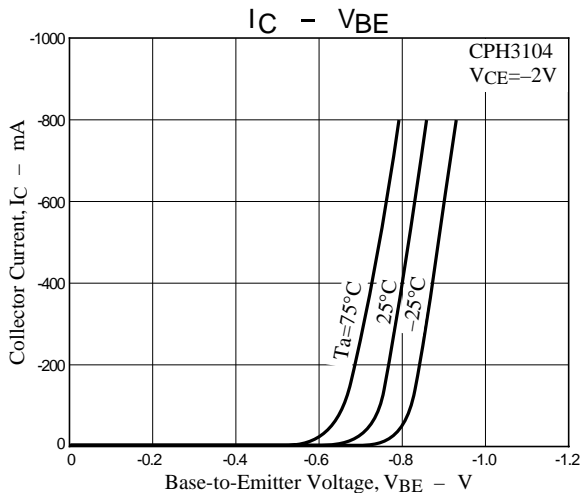
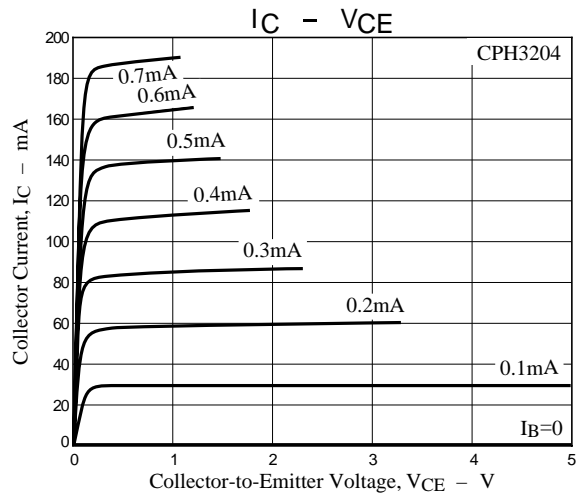
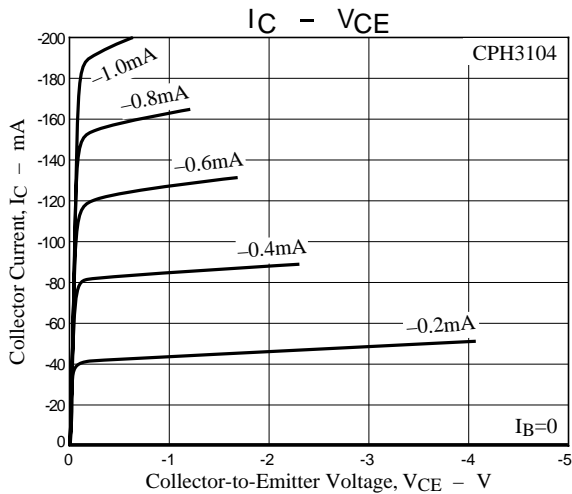
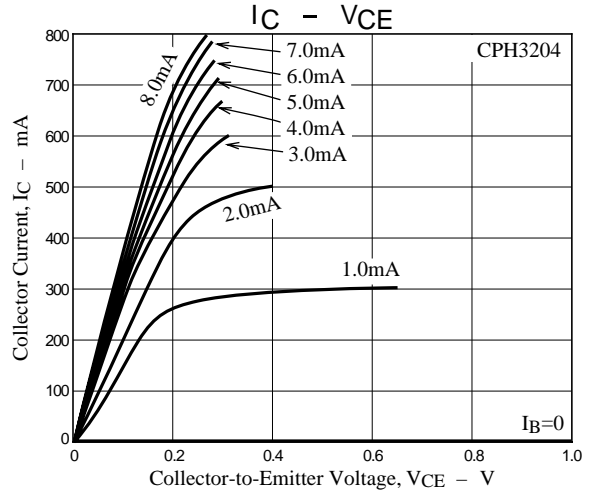
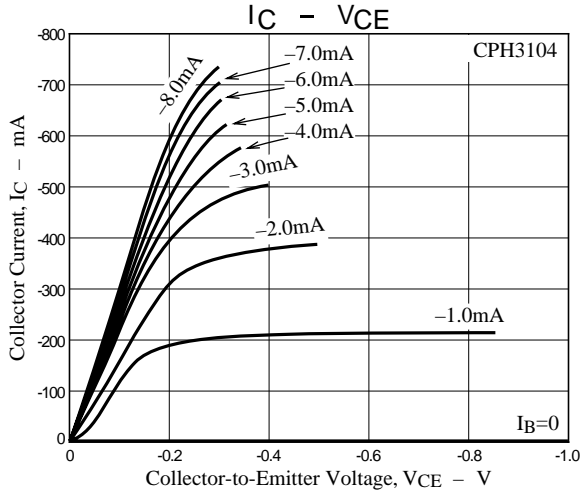
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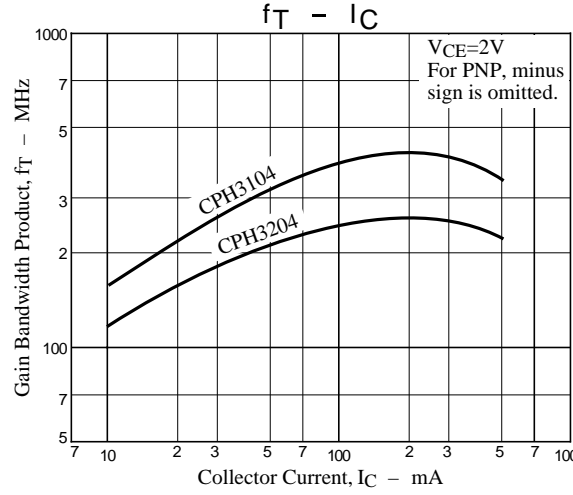
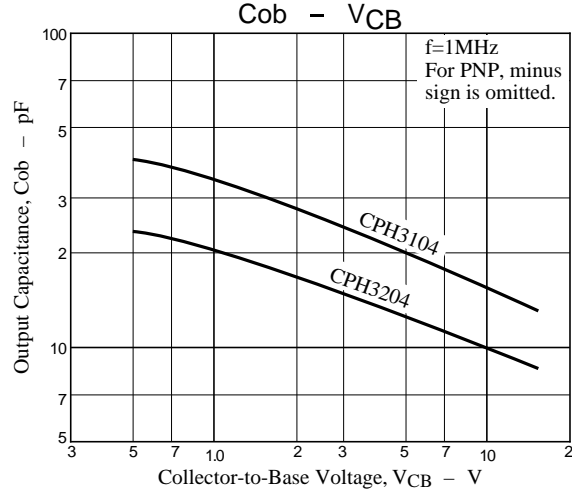
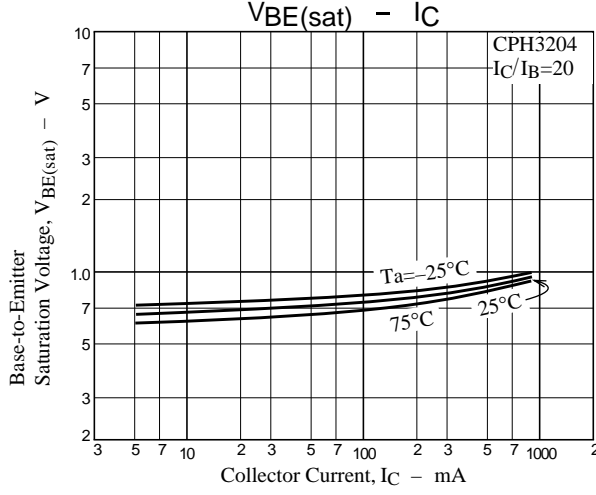
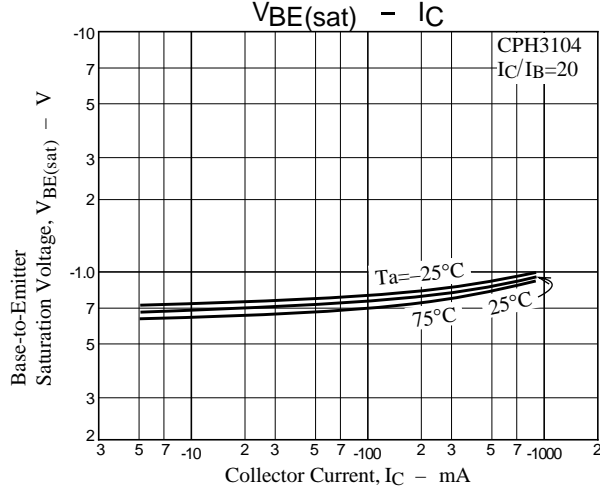
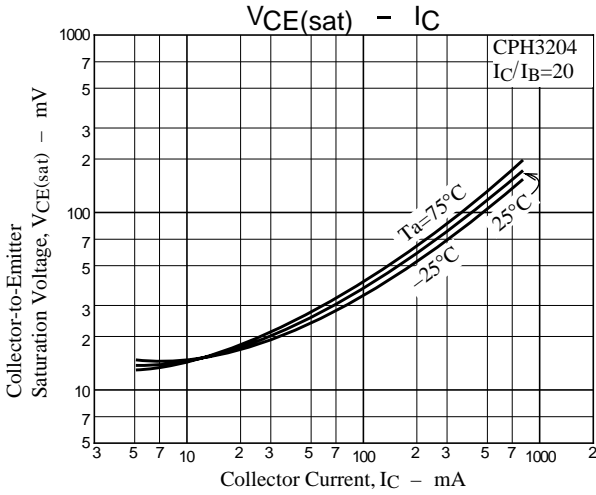
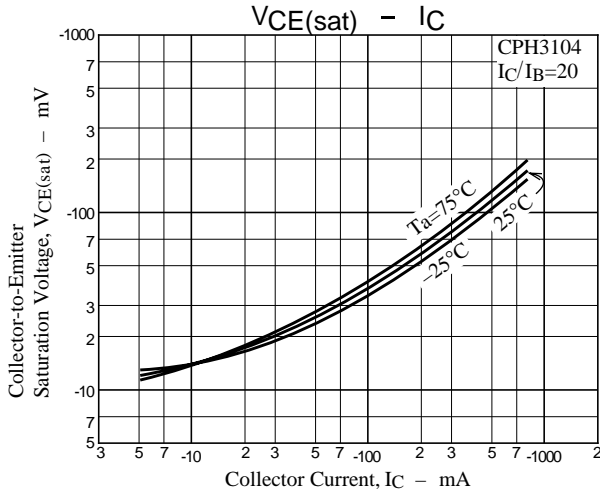
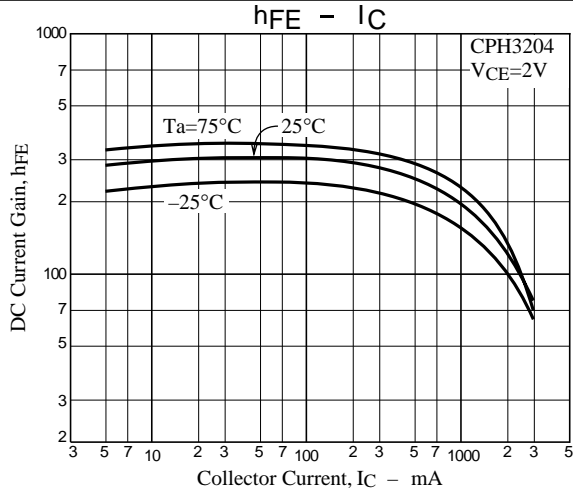
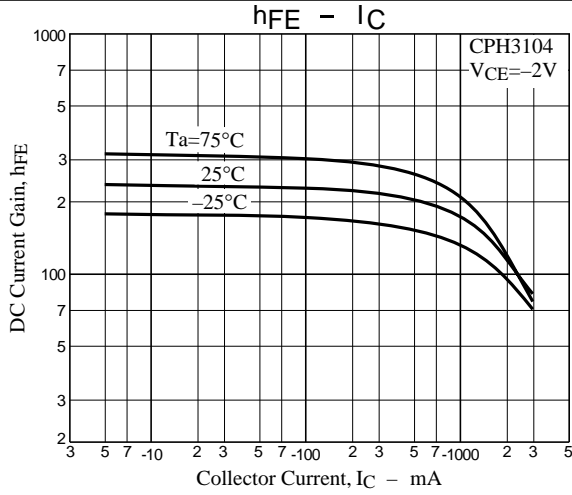
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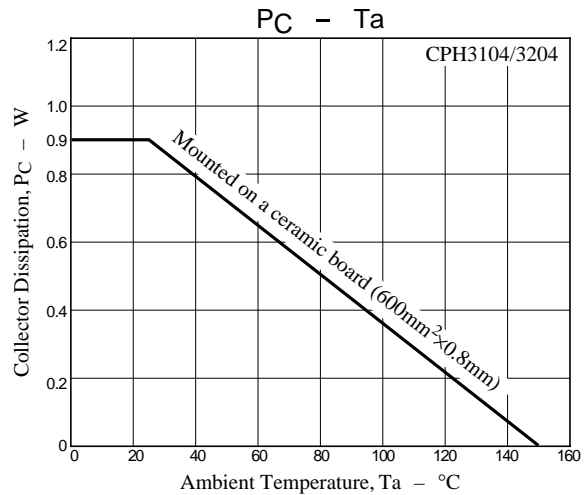
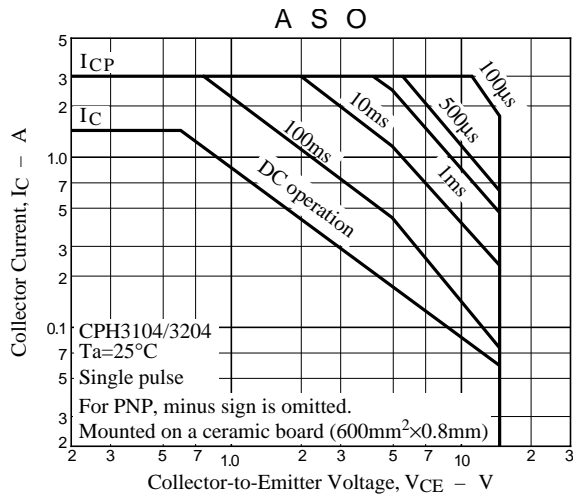
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=(-)5mA, I_B=(-)0.5mA$		(-)10	(-)25	mV
	$V_{CE(sat)2}$	$I_C=(-)500mA, I_B=(-)25mA$		(-)120	(-)240	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)500mA, I_E=(-)25mA$		(-)0.9	(-)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C=(-)10\mu A, I_C=0$	(-)5			V



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