



CPH3120

Compact Motor Driver Applications

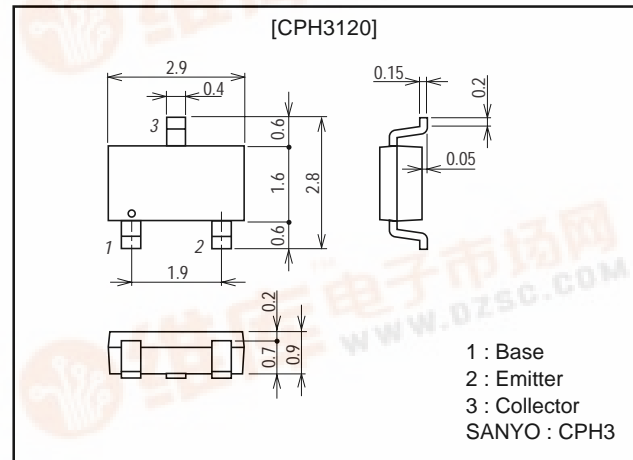
Features

- Small saturation voltage.
- Contains a diode between collector and emitter.
- Contains bias resistance between base and emitter.
- Large current capacity.
- Compact package facilitates implementation of high-density, small-sized hybrid ICs.

Package Dimensions

unit:mm

2150A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		-20	V
Collector-to-Emitter Voltage	V _{CEO}		-15	V
Emitter-to-Base Voltage	V _{EBO}		-5	V
Collector Current	I _C		-0.8	A
Collector Current (Pulse)	I _{CP}		-2	A
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 _{CB0}	V _{CB} =-15V, I _E =0			-1.0	μA
DC Current Gain	h _{FE}	V _{CE} =-2V, I _C =-0.5A	70			
Gain-Bandwidth Product	f _T	V _{CE} =-2V, I _C =-0.5A		200		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		30		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-500mA, I _B =-10mA		-110	-200	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-500mA, I _B =-10mA		-0.81	-1.3	V

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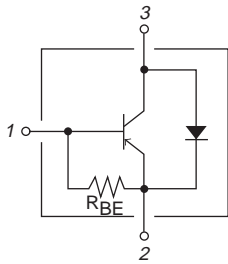


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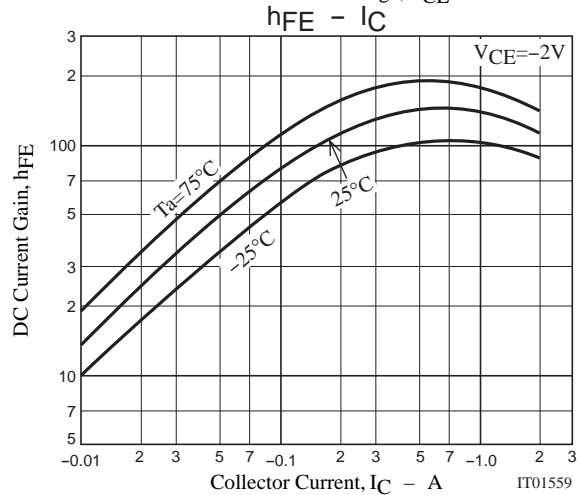
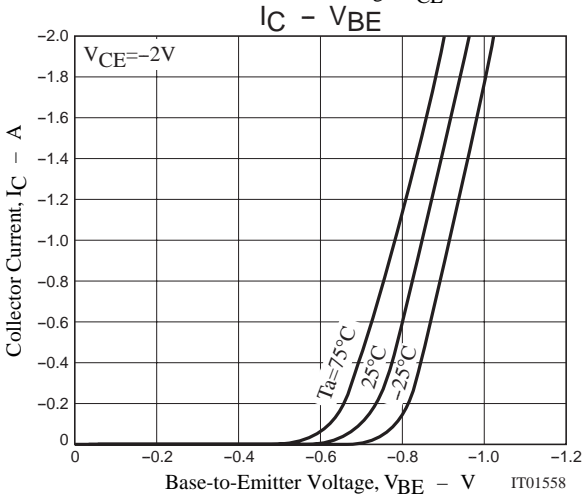
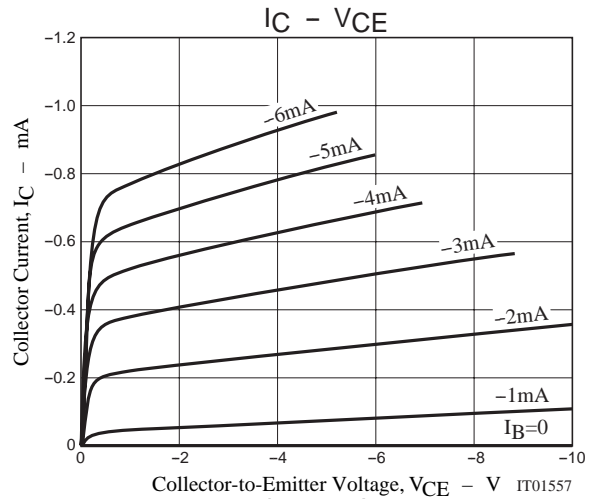
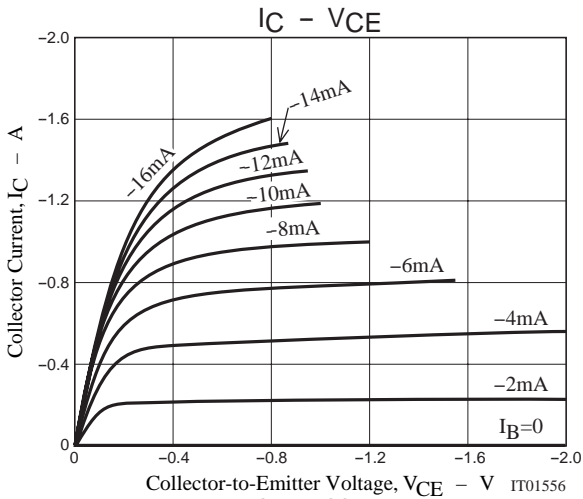
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10mA, R_{BE} = \infty$	-15			V
Diode Forward Voltage	V_F	$I_E = -0.5A$			-1.5	V
Base-to-Emitter Resistance	R_{BE}			1.6		k Ω

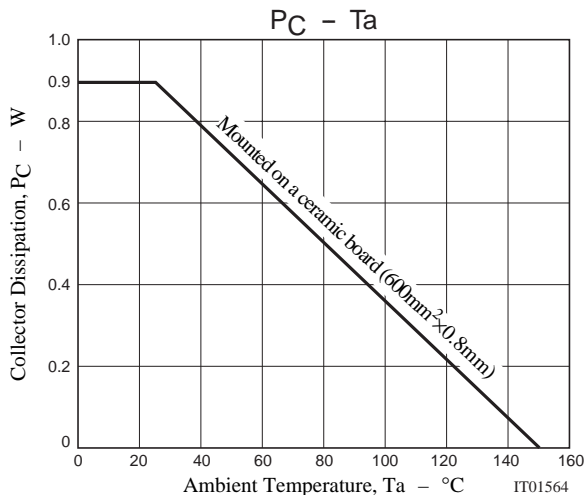
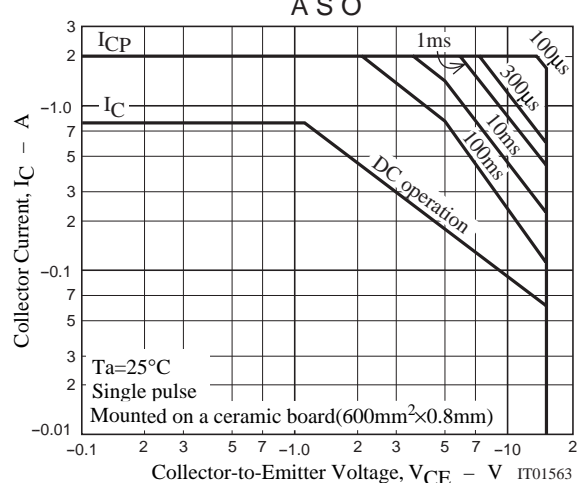
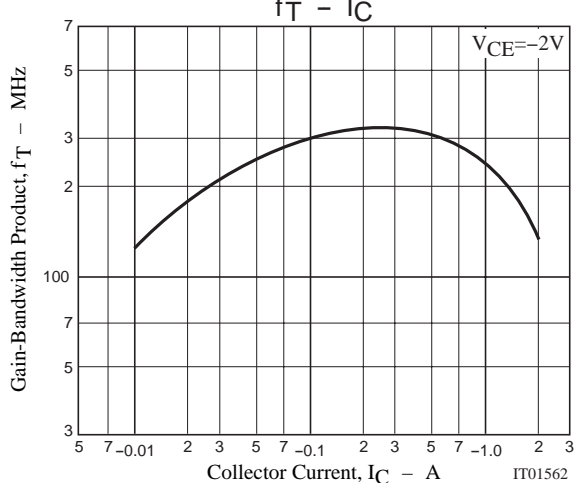
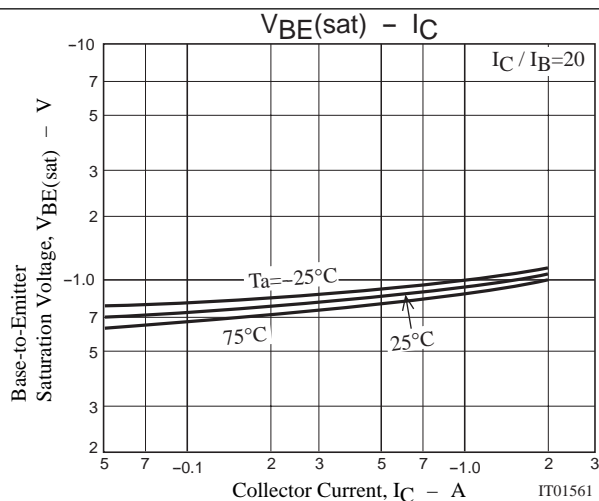
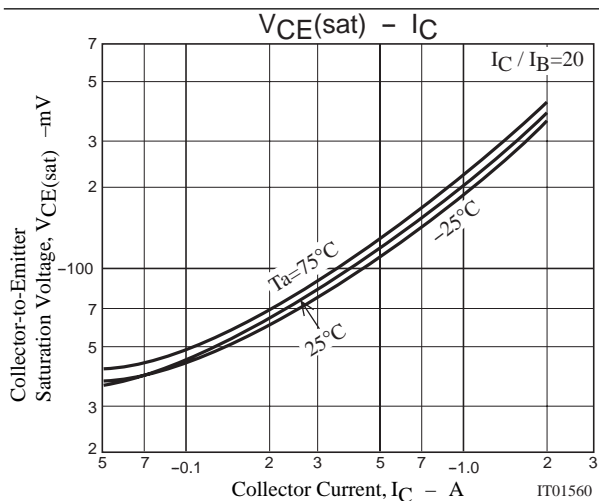
Electrical Connection



- 1 : Base
- 2 : Emitter
- 3 : Collector



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