CPH3144-TL-E Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	CPH3144-TL-E-DG
Manufacturer	onsemi
Manufacturer Product Number	CPH3144-TL-E
Description	TRANS PNP 30V 2A 3CPH
Detailed Description	Bipolar (BJT) Transistor PNP 30 V 2 A 440MHz 900 m W Surface Mount 3-CPH

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
CPH3144-TL-E	onsemi
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
PNP	2 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
30 V	260mV @ 75mA, 1.5A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
100nA (ICBO)	200 @ 100mA, 2V
Power - Max:	Frequency - Transition:
900 mW	440MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SC-96	3-CPH
Base Product Number:	
CPH3144	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

Ordering number : ENN8165

SANYO Semiconductors
DATA SHEET

CPH3144 / CPH3244 — PNP / NPN Epitaxial Planar Silicon Transistors
DC / DC Converter Applications

Applications

- Relay drivers, lamp drivers, motor drivers, flash.

Features

- Adoption of MBIT process.
- High current capacitance.
- Low collector-to-emitter saturation voltage.
- High-speed switching.
- Ultrasmall package facilitates miniaturization in end products (mounting height : 0.9mm).
- High allowable power dissipation.

Specifications ( ) : CPH3144

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-30)40	V
Collector-to-Emitter Voltage	V_{CEO}		(-)30	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)2	A
Collector Current (Pulse)	I_{CP}		(-)5	A
Base Current	I_B		(-)400	mA
Collector Dissipation	P_C	Mounted on a ceramic board (600mm²×0.8mm)	0.9	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-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}=(-)30V, I_E=0			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(-)2V, I_C=(-)100mA	200		560	
Gain-Bandwidth Product	f_T	V_{CE}=(-)10V, I_C=(-)300mA		(440)400		MHz
Output Capacitance	Cob	V_{CB}=(-)10V, f=1MHz		(17)12		pF

Marking : CPH3144 : BD, CPH3244 : DP

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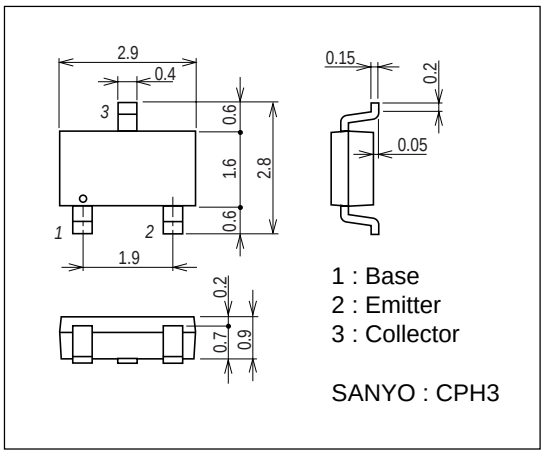
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=(–)1.5A, I_B=(–)75mA		(–170)160	(–260)240	mV
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=(–)1.5A, I_B=(–)75mA		(–)0.94	(–)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–30)40			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)5			V
Turn-ON Time	t_{on}	See specified Test Circuit.		(45)40		ns
Storage Time	t_{stg}	See specified Test Circuit.		(200)350		ns
Fall Time	t_f	See specified Test Circuit.		(23)30		ns

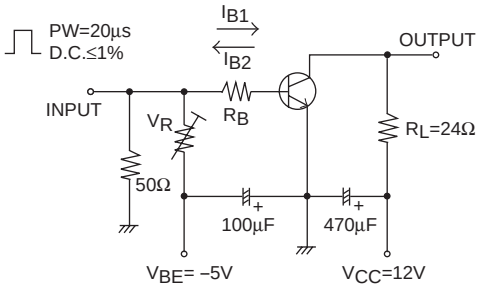
Package Dimensions

unit : mm

2150A

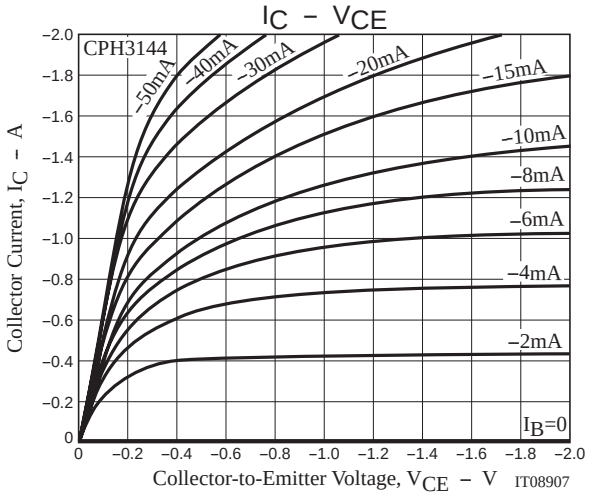


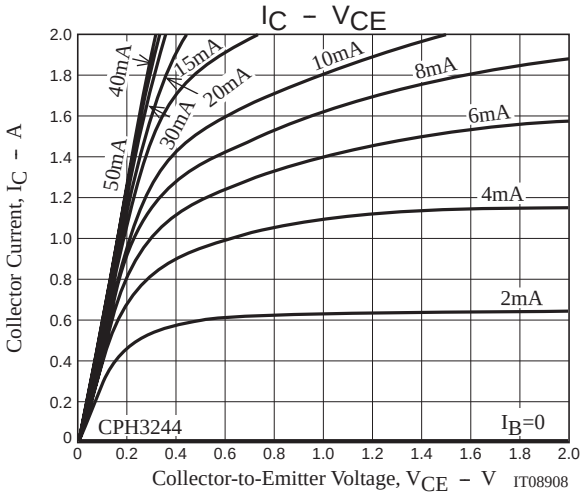
Switching Time Test Circuit

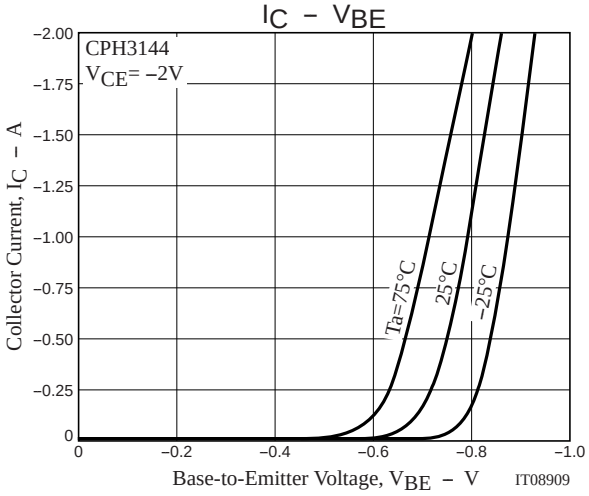


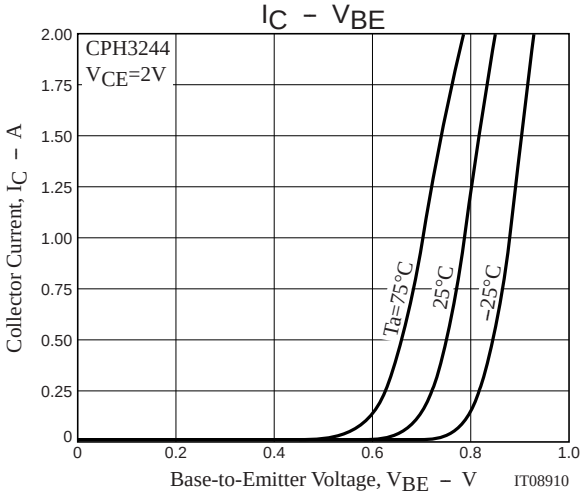
I_C=20I_{B1}= –20I_{B2}=500mA

For PNP, the polarity is reversed.









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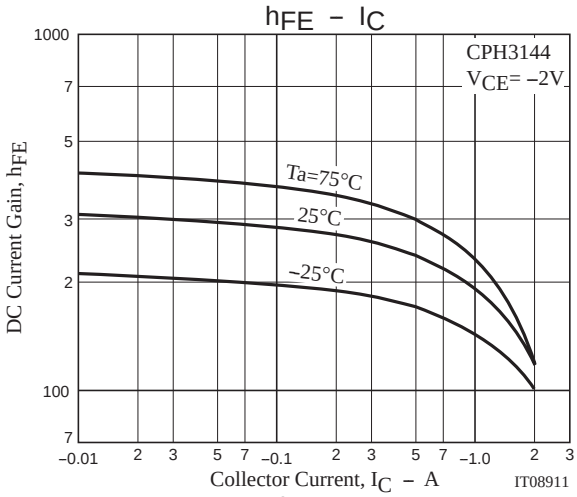

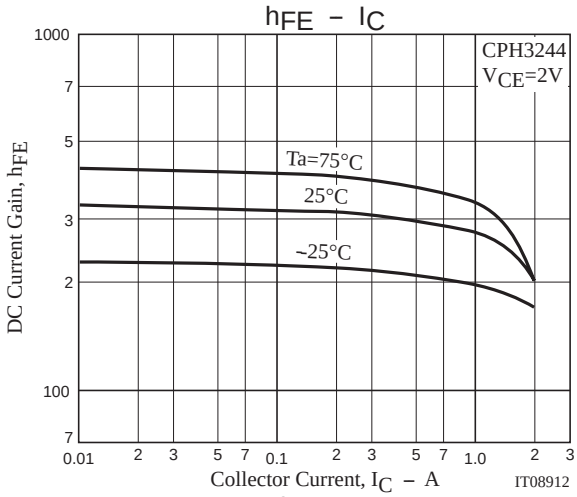

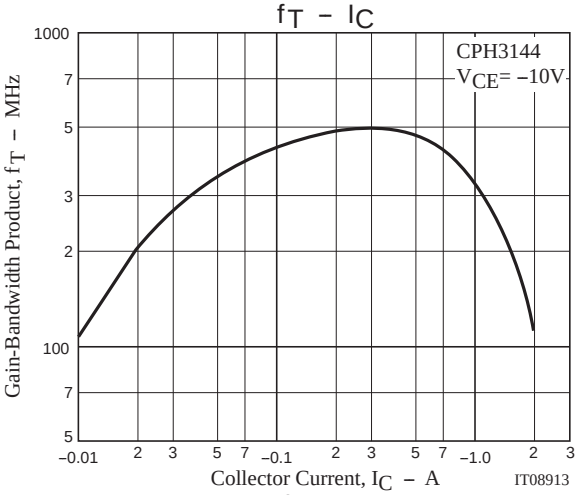

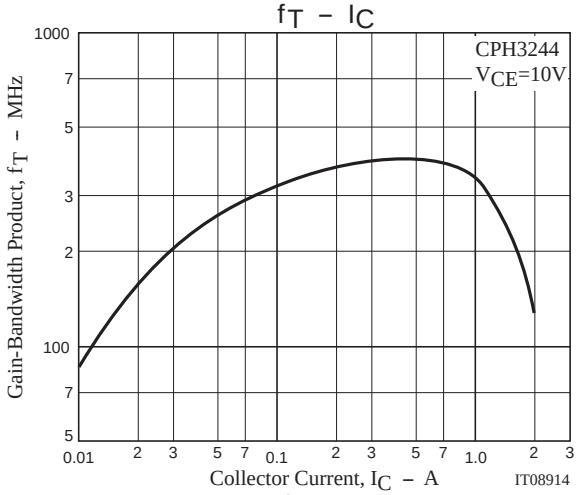

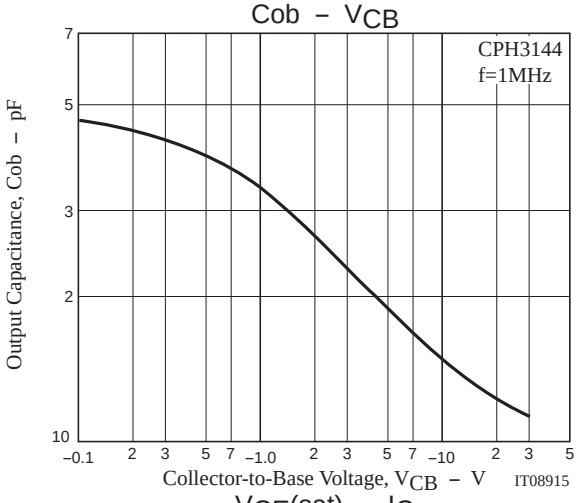

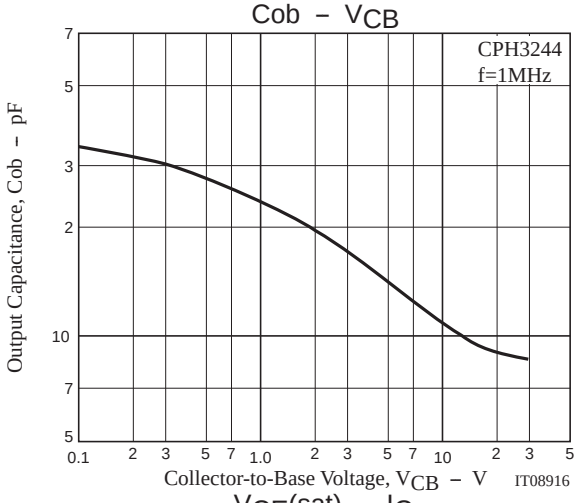

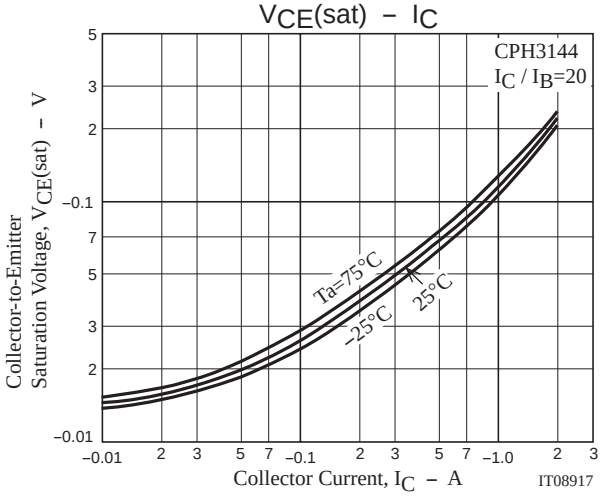

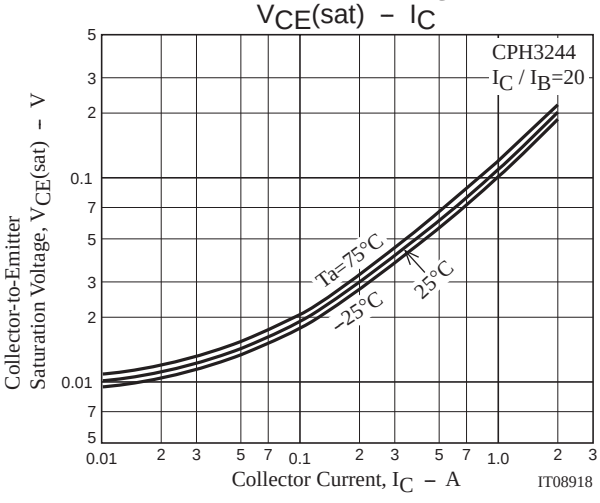

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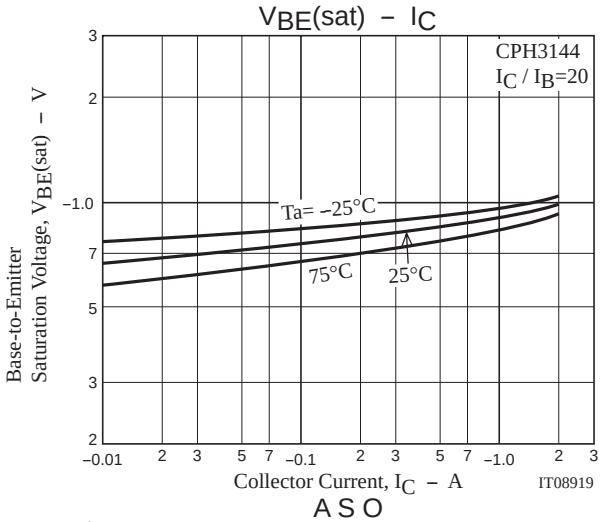

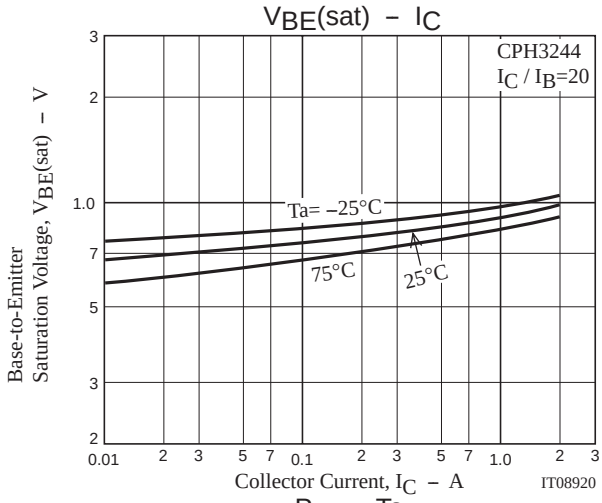

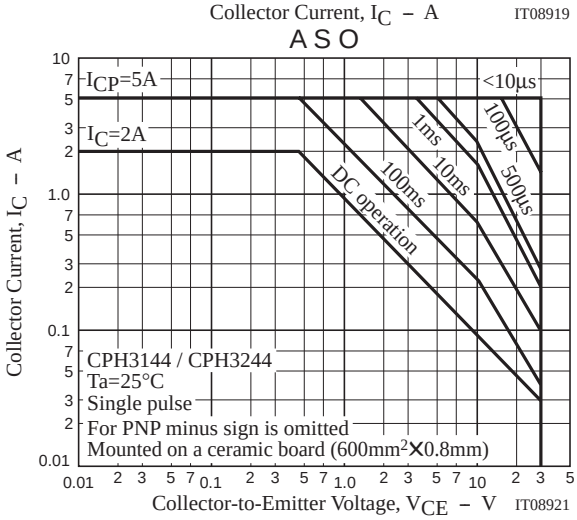

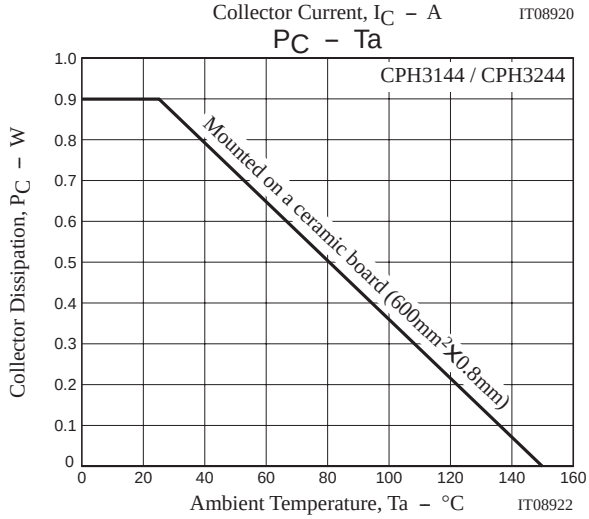

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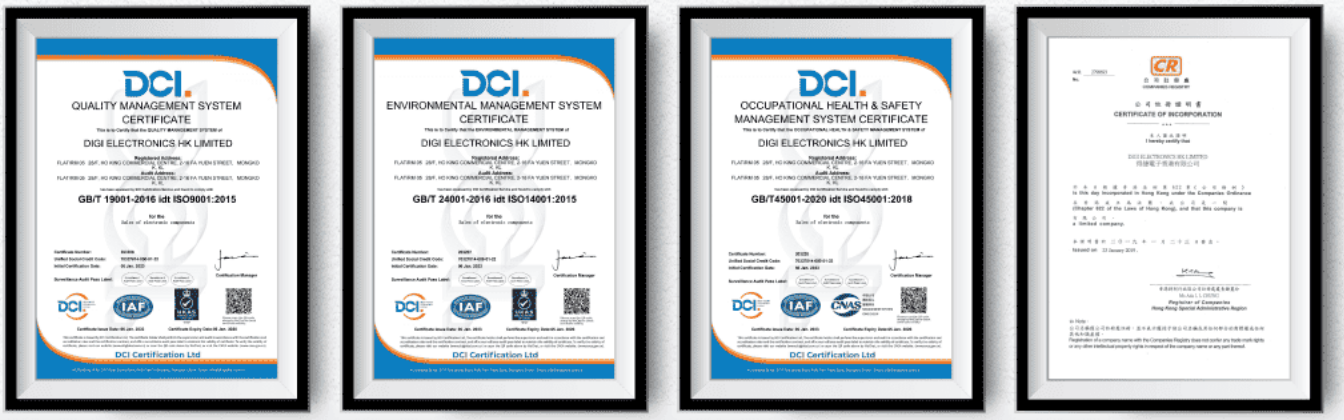

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