Ordering number : ENA0522

SANYO Semiconductors
DATA SHEET

CPH6532 — NPN Epitaxial Planar Silicon Transistor
DC / DC Converter Applications

Applications

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

Features

- Composite type with two NPN transistors contained in one package facilitating high-density mounting.
- The two chips contained are equivalent to the CPH3216.
- Ultrasmall package permitting applied sets to be small and slim.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		80	V
Collector-to-Emitter Voltage	V_{CES}		80	V
Collector-to-Emitter Voltage	V_{CEO}		50	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		1.0	A
Collector Current (Pulse)	I_{CP}		2	A
Base Current	I_B		200	mA
Collector Dissipation	P_C	Mounted on a ceramic board (600mm²×0.8m) 1unit	0.9	W
Total Power Dissipation	P_T	Mounted on a ceramic board (600mm²×0.8m)	1.1	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}=40V, I_E=0A			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0A			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		420		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		6		pF

Marking : ET

Continued on next page.

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

Continued from preceding page.

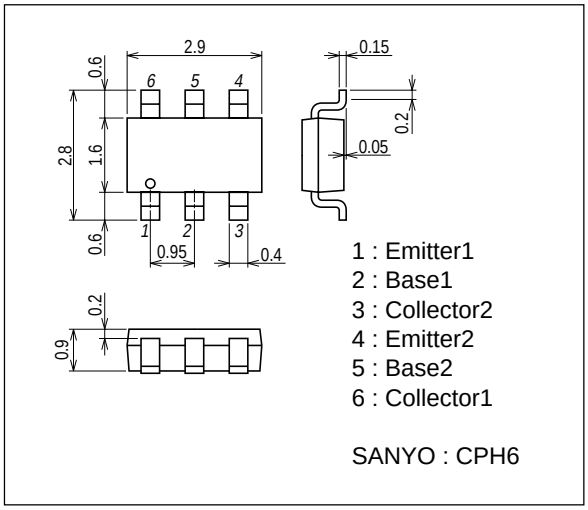
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE}(sat)1$	I_C=500mA, I_B=10mA		130	190	mV
	$V_{CE}(sat)2$	I_C=300mA, I_B=6mA		90	135	mV
Base-to-Emitter Saturation Voltage	$V_{BE}(sat)$	I_C=500mA, I_B=10mA		0.81	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0A	80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CES}$	I_C=100μA, R_{BE}=0Ω	80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0A	5			V
Turm-ON Time	t_{on}	See specified Test Circuit.		38		ns
Storage Time	t_{stg}	See specified Test Circuit.		332		ns
Fall Time	t_f	See specified Test Circuit.		40		ns

Note) The specifications shown above are for each individual transistor.

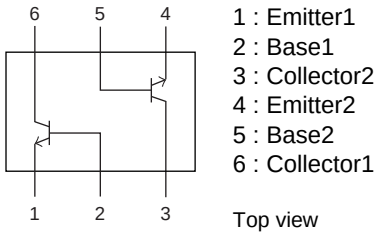
Package Dimensions

unit : mm (typ)

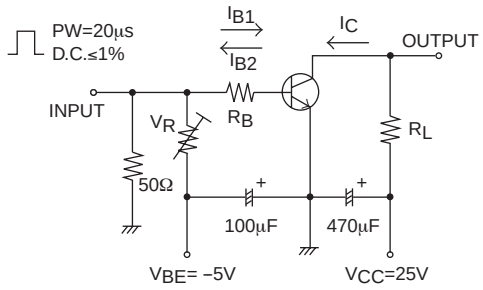
7018A-006



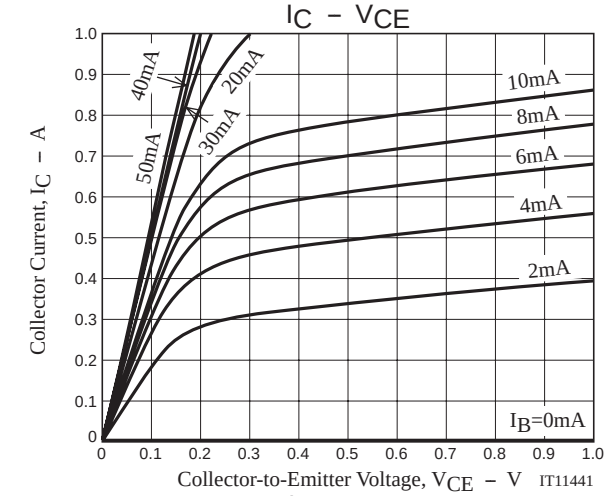
Electrical Connection

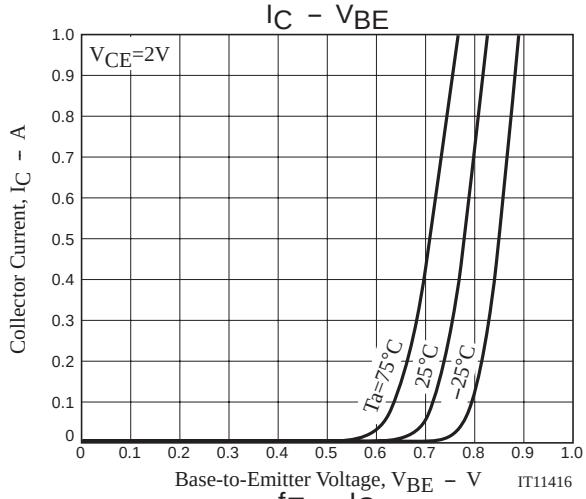


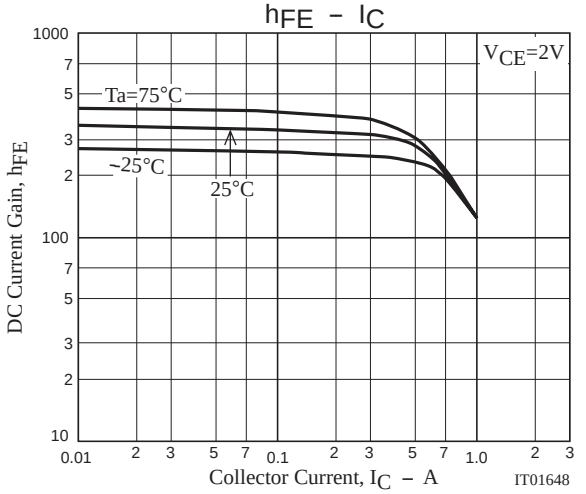
Switching Time Test Circuit

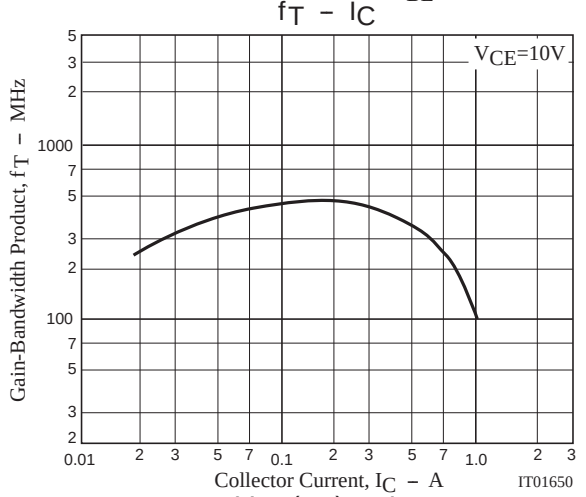


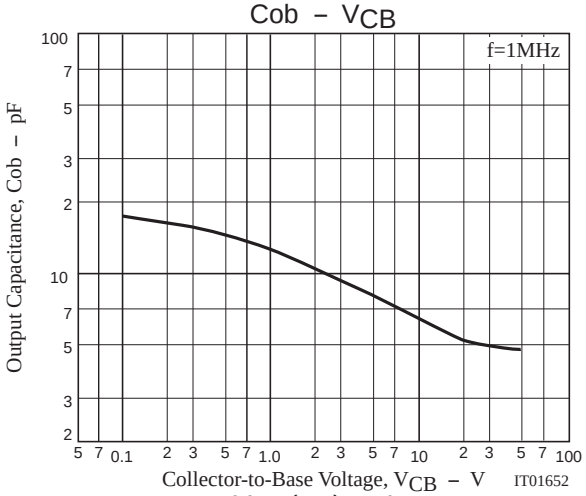
$20I_{B1}$= −$20I_{B2}$=I_C=500mA

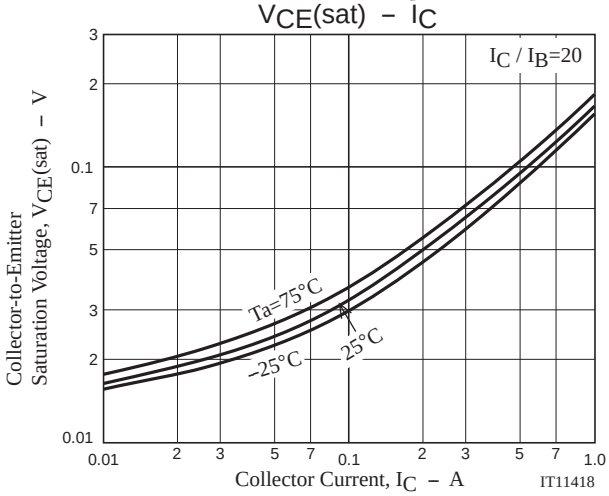

IC – VCE
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
IT11441
40mA
50mA
30mA
20mA
10mA
8mA
6mA
4mA
2mA
IB=0mA

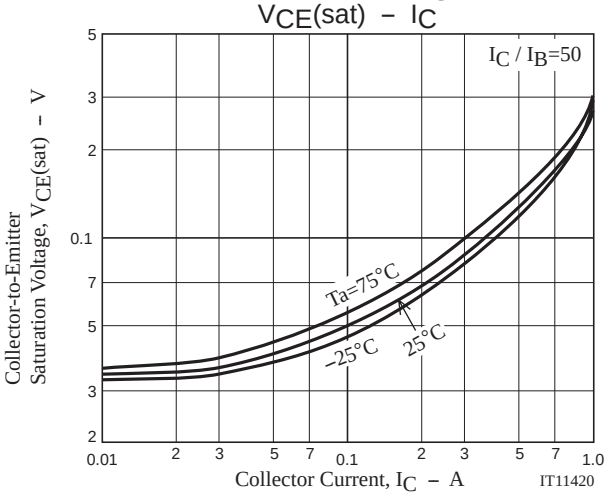

IC – VBE
Collector Current, IC – A
Base-to-Emitter Voltage, VBE – V
IT11416
VCE=2V
Ta=75°C
25°C
–25°C

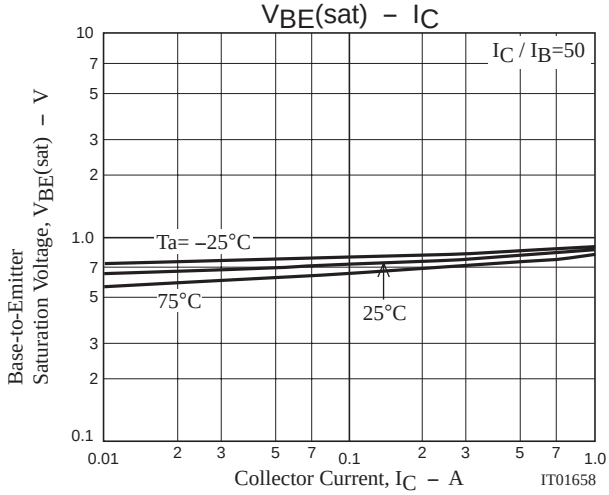

hFE – IC
DC Current Gain, hFE
Collector Current, IC – A
IT01648
VCE=2V
Ta=75°C
–25°C
25°C


fT – IC
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – A
IT01650
VCE=10V


Cob – VCB
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT01652
f=1MHz


VCE(sat) – IC
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
IT11418
IC / IB=20
Ta=75°C
25°C
–25°C


VCE(sat) – IC
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
IT11420
IC / IB=50
Ta=75°C
25°C
–25°C


VBE(sat) – IC
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A
IT01658
IC / IB=50
Ta= –25°C
75°C
25°C