Ordering number : ENA1836

SANYO Semiconductors

DATA SHEET

PCP1208 — NPN Epitaxial Planar Silicon Transistor

LED Back Light

Features

- V_{CEO}=200V, I_C=0.7A
- High allowable power dissipation
- Halogen free compliance
- Low collector-to-emitter saturation voltage V_{CE}(sat)=0.115V(typ.)@I_C=0.35A
- High-speed switching t_f=70ns(typ.)@I_C=0.3A

Specifications

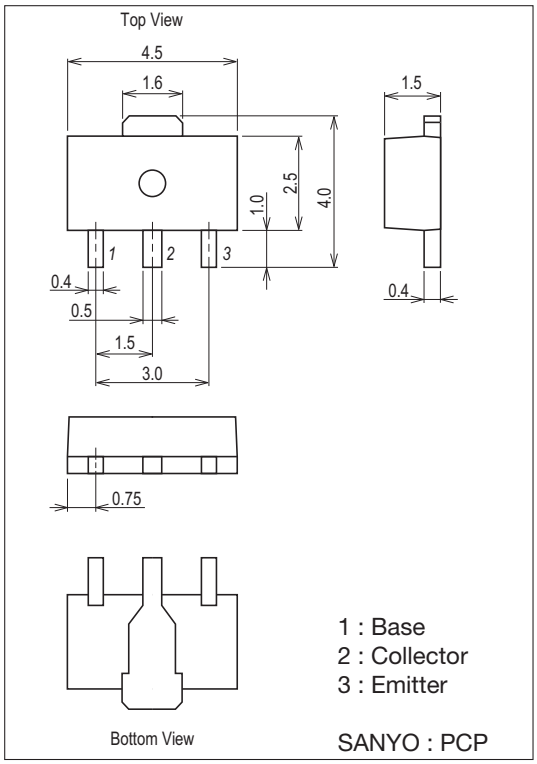
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		220	V
Collector-to-Emitter Voltage	V_{CEO}		200	V
Emitter-to-Base Voltage	V_{EBO}		8	V
Collector Current	I_C		0.7	A
Collector Current (Pulse)	I_{CP}		2	A
Base Current	I_B		140	mA
Collector Dissipation	P_C	When mounted on ceramic substrate (450mm^2×0.8mm)	1.3	W
		Tc=25°C	3.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ)

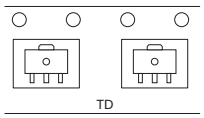
7007B-004



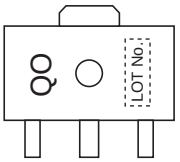
Product & Package Information

- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1000 pcs./reel

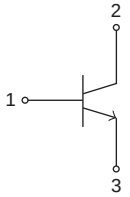
Packing Type : TD



Marking



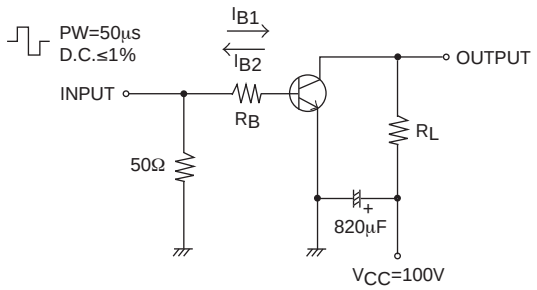
Electrical Connection



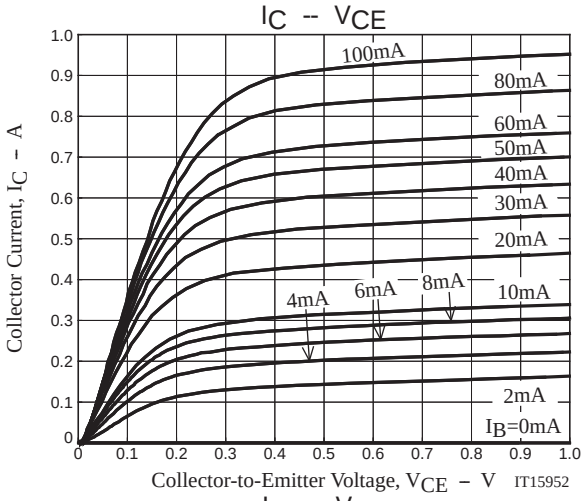
Electrical Characteristics at Ta=25°C

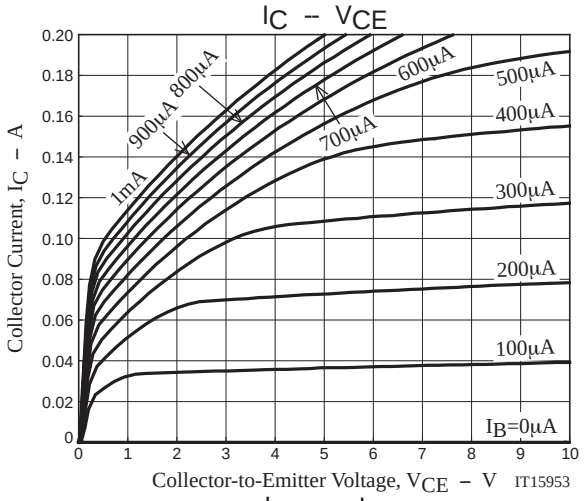
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=100V, I_E=0A			1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0A			1	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=100mA	200		560	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=100mA		120		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		9		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=0.35A, I_B=35mA		115	200	mV
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=0.35A, I_B=35mA		0.82	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0A	220			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0A	8			V
Turn-On Time	t_{on}	See specified Test Circuit.		50		ns
Storage Time	t_{stg}	See specified Test Circuit.		2		μs
Fall Time	t_f	See specified Test Circuit.		70		ns

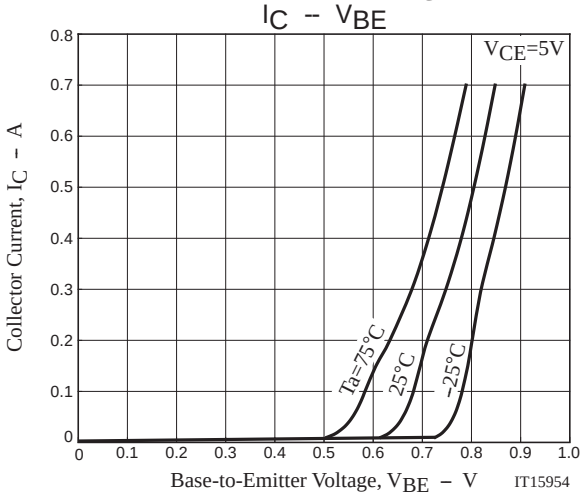
Switching Time Test Circuit

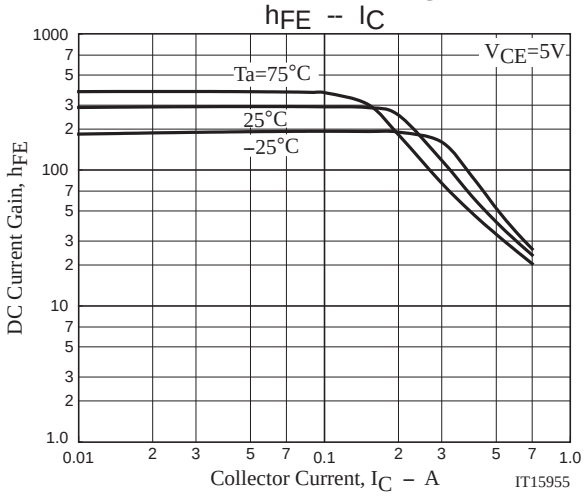


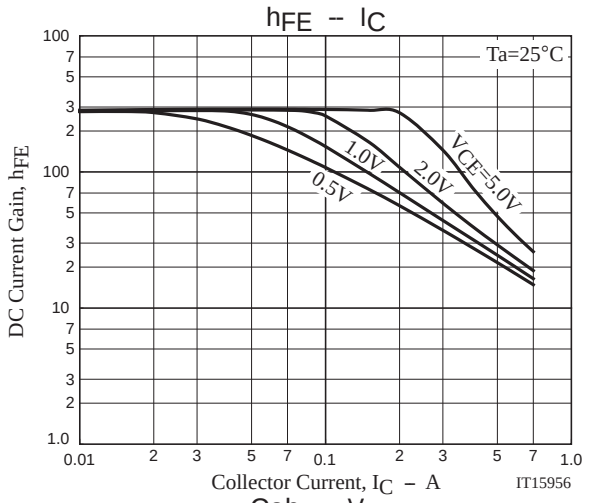
I_C=10I_{B1}= −10I_{B2}=0.3A

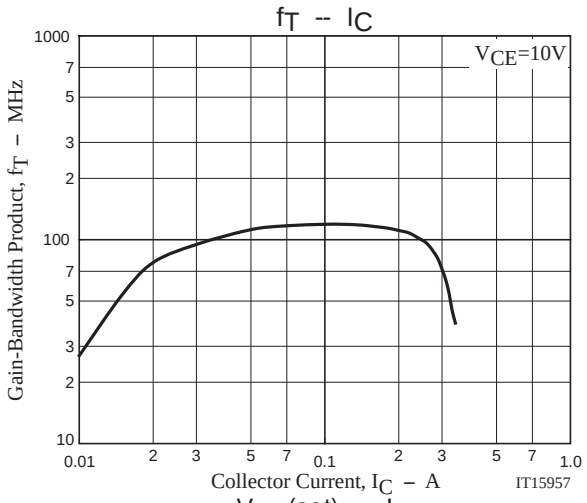


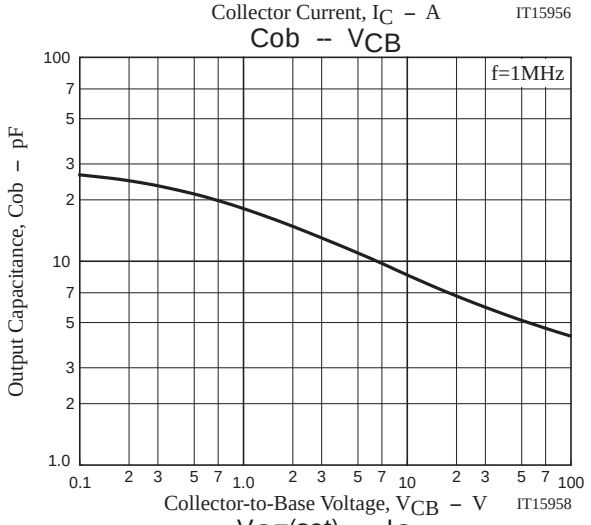


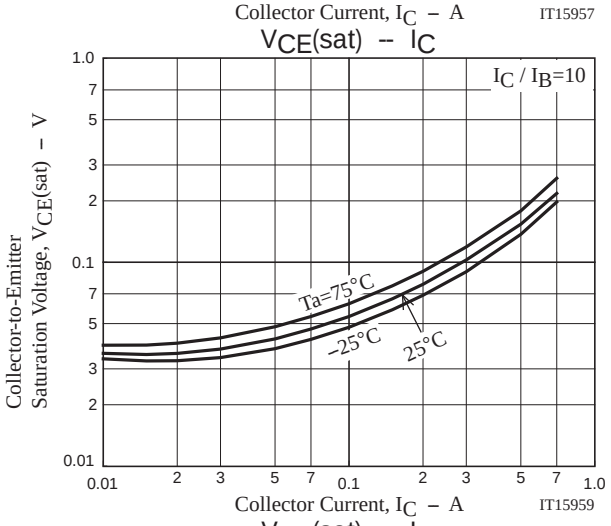


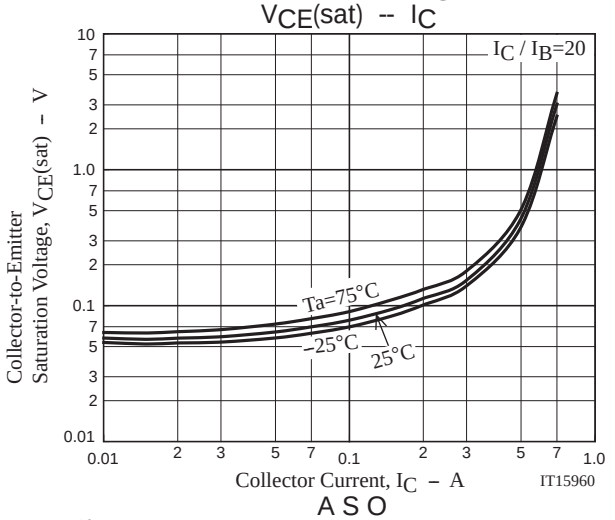


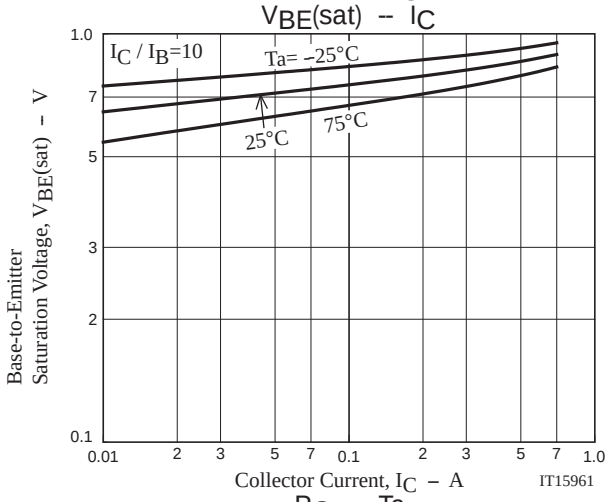

hFE -- IC
Ta=25°C
VCE=5.0V
2.0V
1.0V
0.5V
DC Current Gain, hFE
Collector Current, IC – A
IT15956

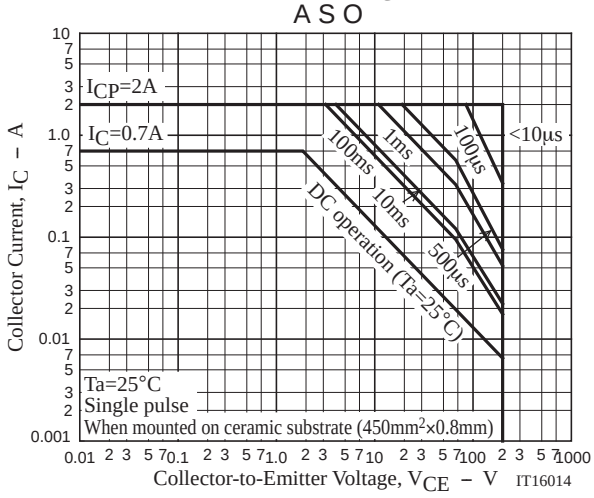

fT -- IC
VCE=10V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – A
IT15957

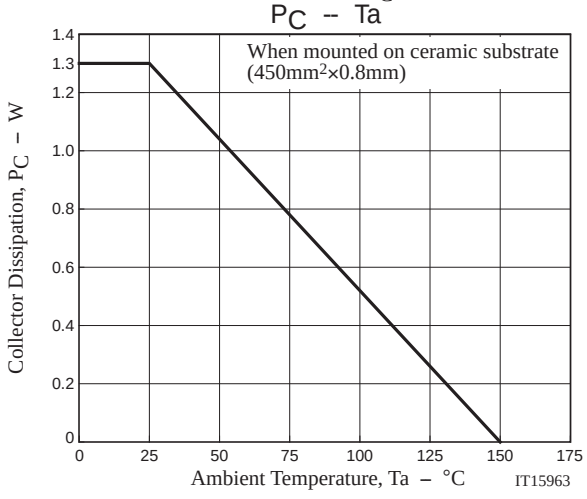

Cob -- VCB
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT15958


VCE(sat) -- IC
IC / IB=10
Ta=75°C
–25°C
25°C
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
IT15959


VCE(sat) -- IC
IC / IB=20
Ta=75°C
–25°C
25°C
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – A
IT15960


VBE(sat) -- IC
IC / IB=10
Ta= –25°C
25°C
75°C
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A
IT15961


A S O
ICP=2A
IC=0.7A
100ms
1ms
100µs
<10µs
10ms
DC operation (Ta=25°C)
500µs
Ta=25°C
Single pulse
When mounted on ceramic substrate (450mm²×0.8mm)
Collector Current, IC – A
Collector-to-Emitter Voltage, VCE – V
IT16014


PC -- Ta
When mounted on ceramic substrate
(450mm²×0.8mm)
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C
IT15963

This catalog provides information as of January, 2011. Specifications and information herein are subject to change without notice.