



PCP1208 — NPN Epitaxial Planar Silicon Transistor LED Back Light

Features

- $V_{CE0}=200V, I_C=0.7A$
- High allowable power dissipation
- Halogen free compliance
- Low collector-to-emitter saturation voltage $V_{CE(sat)}=0.115V(\text{typ.})@I_C=0.35A$
- High-speed switching $t_f=70ns(\text{typ.})@I_C=0.3A$

Specifications

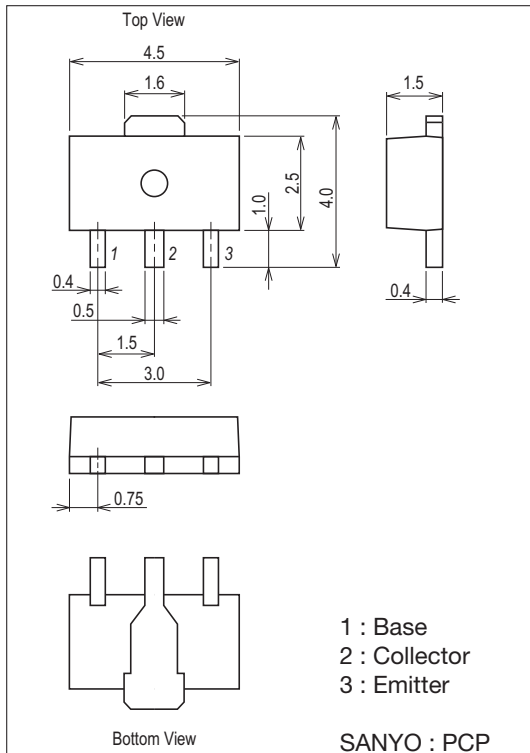
Absolute Maximum Ratings at $T_a=25^\circ C$

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 x0.8mm)	1.3	W
		$T_c=25^\circ C$	3.5	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions

unit : mm (typ)

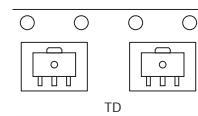
7007B-004



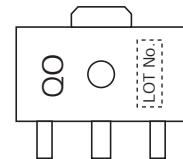
Product & Package Information

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

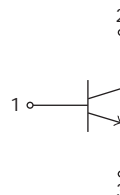
Packing Type : TD



Marking



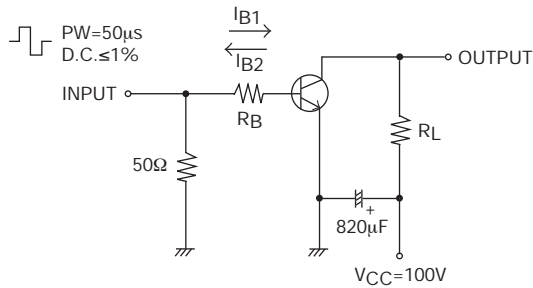
Electrical Connection



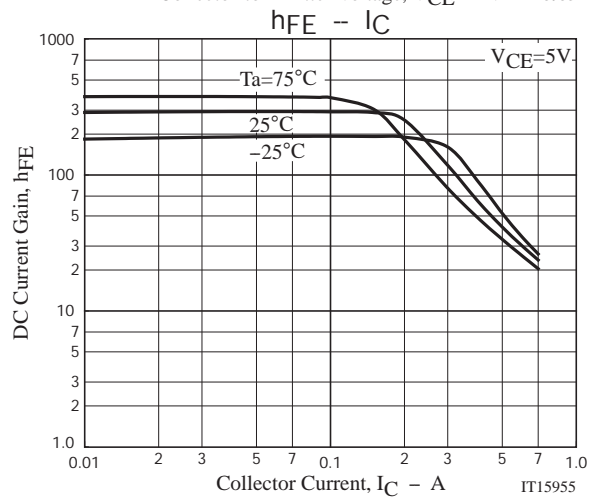
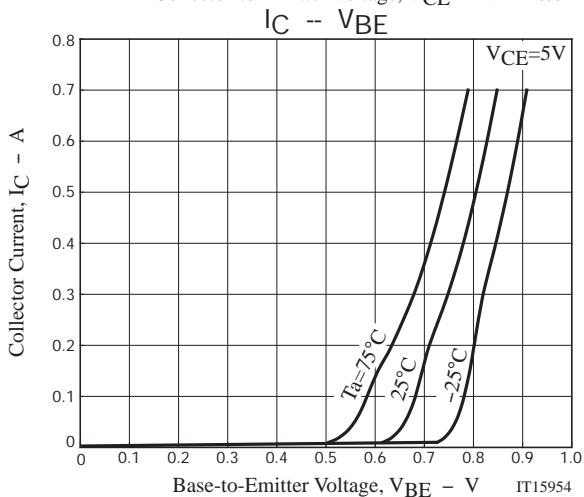
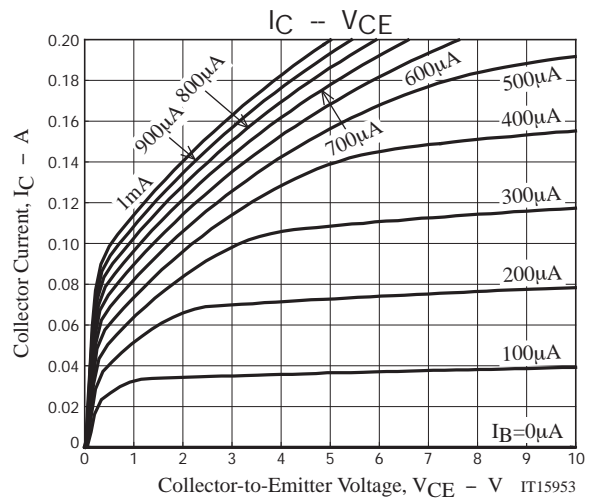
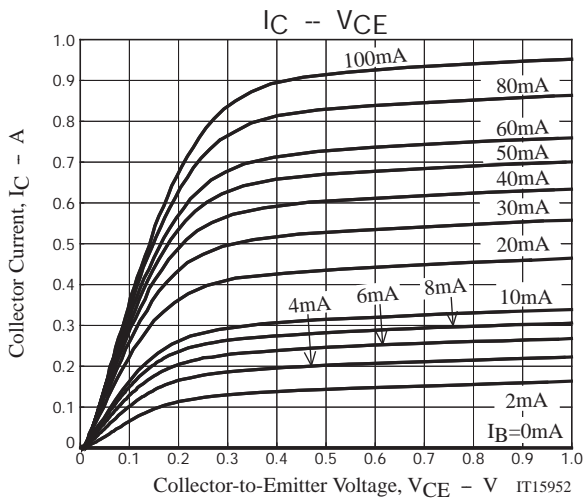
Electrical Characteristics at Ta=25°C

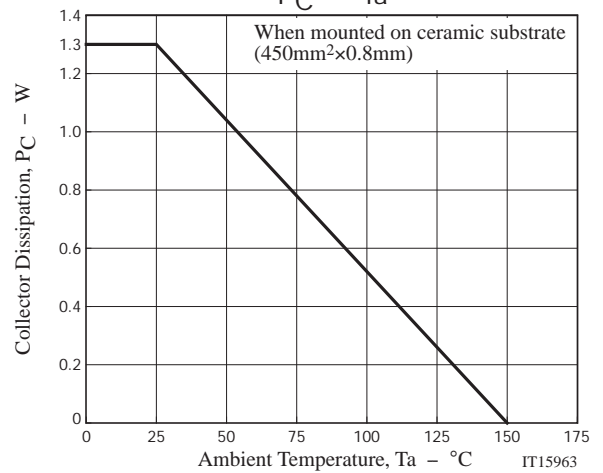
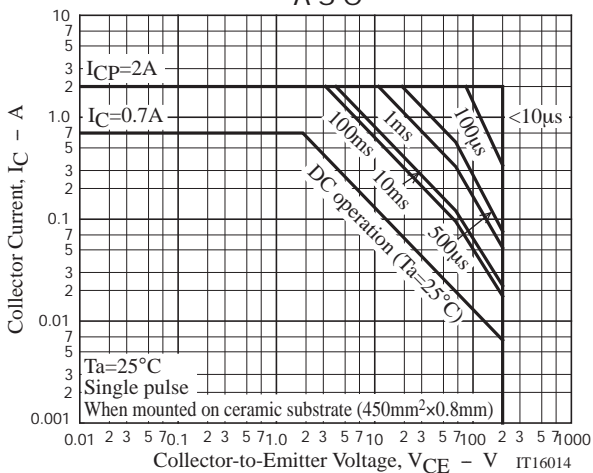
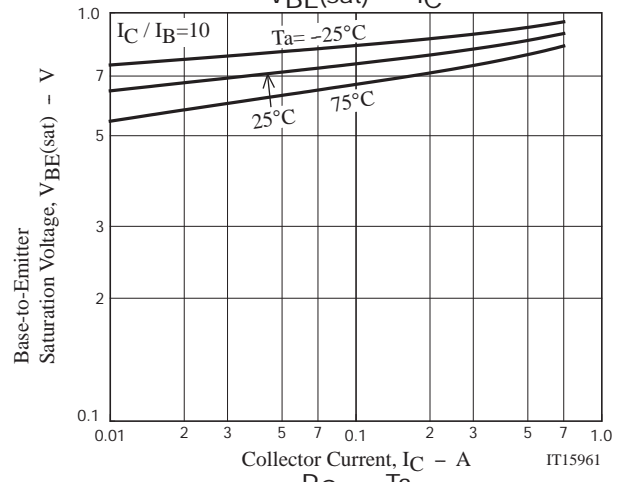
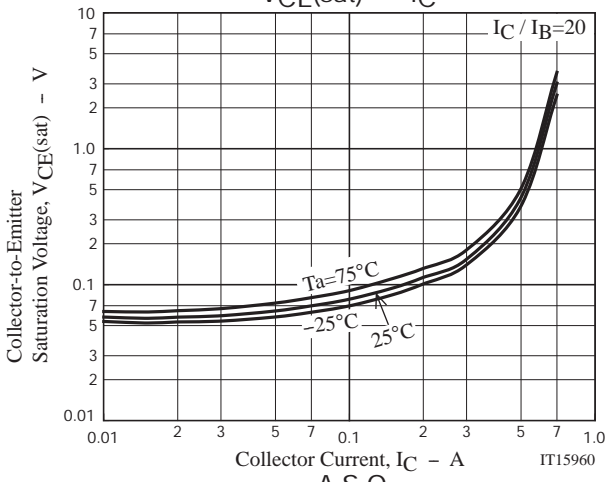
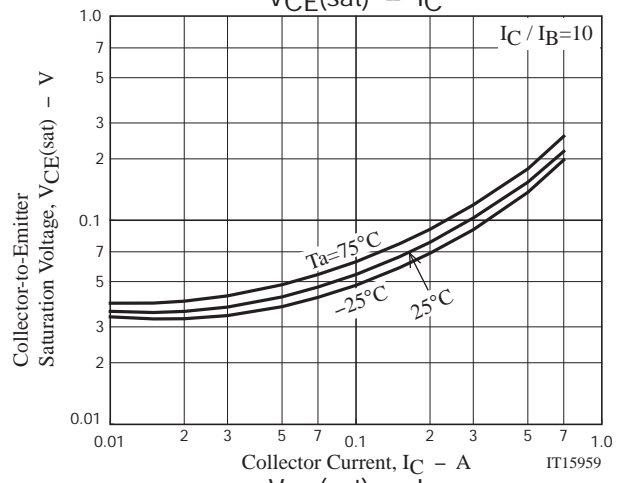
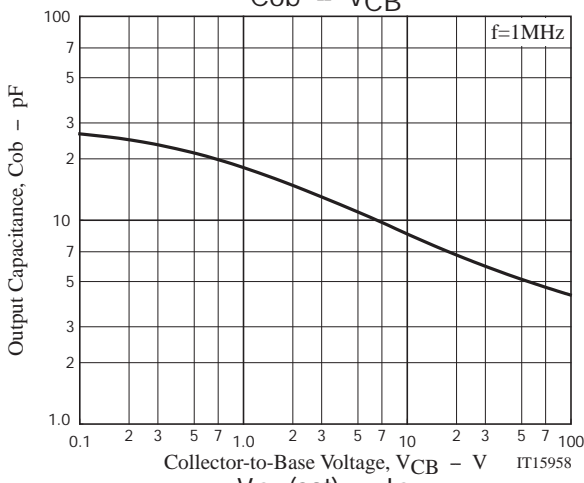
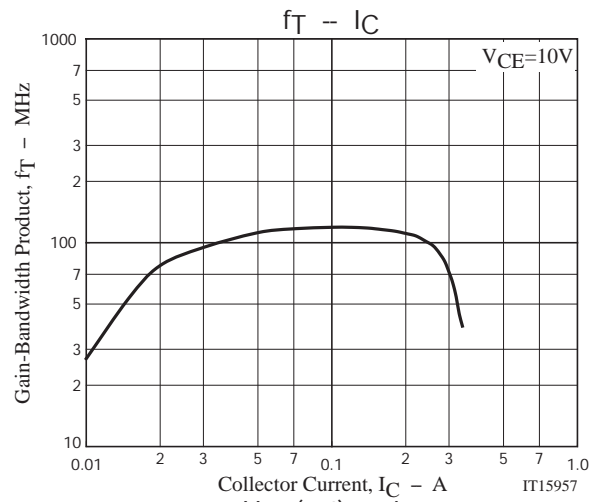
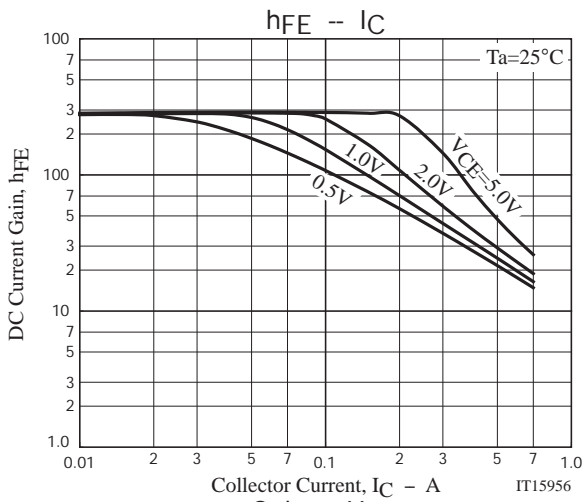
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =100V, I _E =0A			1	μA
Emitter Cutoff Current	IEBO	V _{EB} =4V, I _C =0A			1	μA
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =100mA	200		560	
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =100mA		120		MHz
Output Capacitance	C _{ob}	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



$I_C = 10I_{B1} = -10I_{B2} = 0.3A$





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