

PUA3220 (PU3220)

Silicon PNP epitaxial planar type darlington

For power amplification

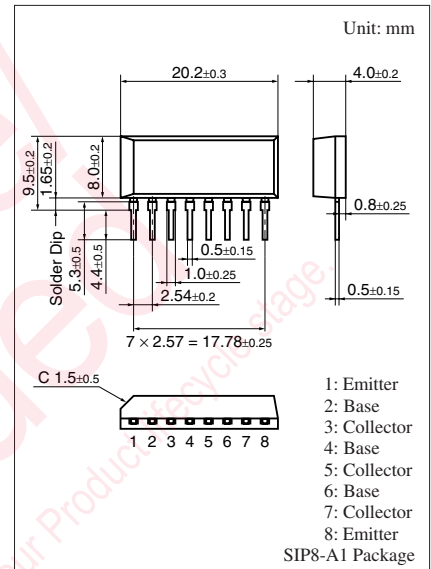
Complementary to PUA3120 (PU3120)

■ Features

- High forward current transfer ratio h_{FE}
- High-speed switching
- PNP 3 elements

■ Absolute Maximum Ratings $T_C = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-60	V
Collector-emitter voltage (Base open)	V_{CEO}	-60	V
Emitter-base voltage (Collector open)	V_{EBO}	-5	V
Collector current	I_C	-4	A
Peak collector current	I_{CP}	-8	A
Collector power dissipation	P_C	15	W
	$T_a = 25^\circ C$	2.4	
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$



■ Electrical Characteristics $T_C = 25^\circ C \pm 3^\circ C$

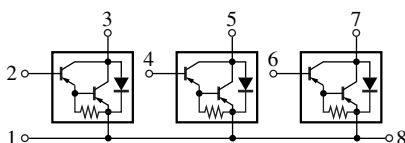
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -30 \text{ mA}, I_B = 0$	-60			V
Base-emitter voltage	V_{BE}	$V_{CE} = -3 \text{ V}, I_C = -3 \text{ A}$			-2.5	V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -60 \text{ V}, I_E = 0$			-200	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -30 \text{ V}, I_B = 0$			-500	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -5 \text{ V}, I_C = 0$			-2	mA
Forward current transfer ratio	h_{FE1}	$V_{CE} = -3 \text{ V}, I_C = -0.5 \text{ A}$	1000			—
	h_{FE2}^*	$V_{CE} = -3 \text{ V}, I_C = -3 \text{ A}$	1000		10000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3 \text{ A}, I_B = -12 \text{ mA}$			-2.0	V
Transition frequency	f_T	$V_{CE} = -10 \text{ V}, I_C = -0.5 \text{ A}, f = 1 \text{ MHz}$		15		MHz
Turn-on time	t_{on}	$I_C = -3 \text{ A}$		0.3		μs
Storage time	t_{stg}	$I_{B1} = -12 \text{ mA}, I_{B2} = 12 \text{ mA}$		2.0		μs
Fall time	t_f	$V_{CC} = -50 \text{ V}$		0.5		μs

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

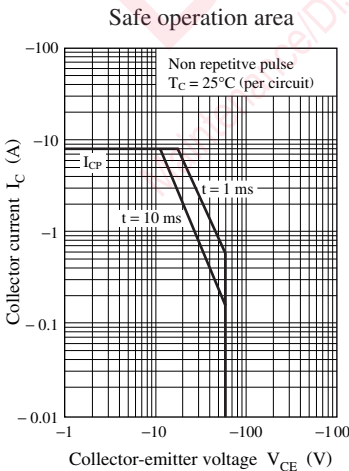
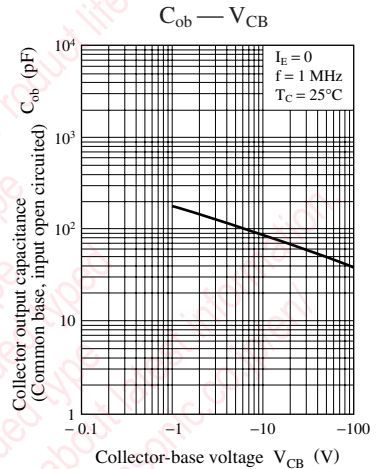
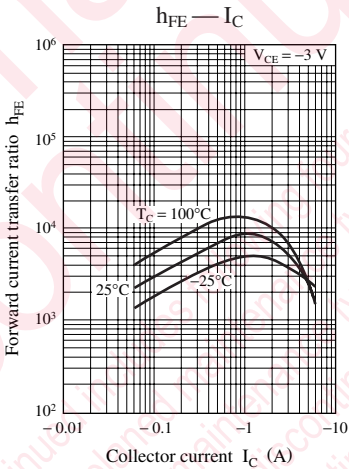
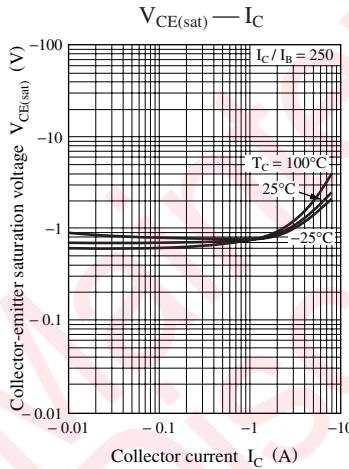
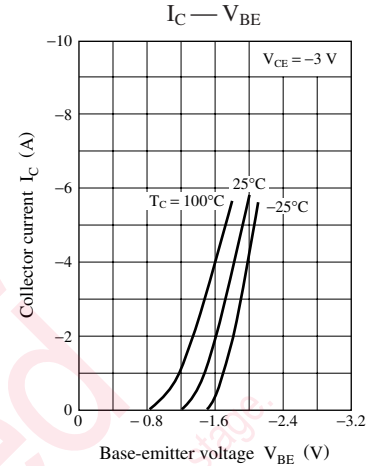
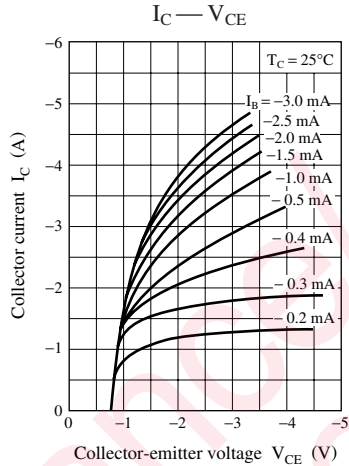
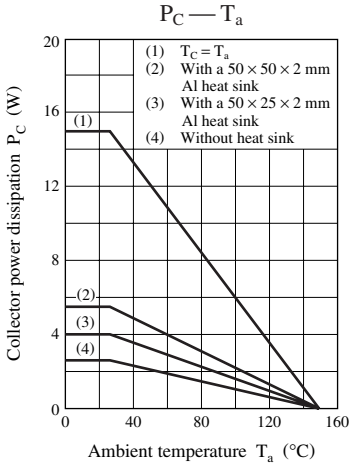
2. *: Rank classification

Rank	Free	P	Q
h_{FE}	1 000 to 10 000	2 000 to 10 000	1 000 to 5 000

■ Internal Connection



Note) The part number in the parenthesis shows conventional part number.



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