

PUA3228

Silicon NPN Epitaxial Planar Type

Power Amplifier

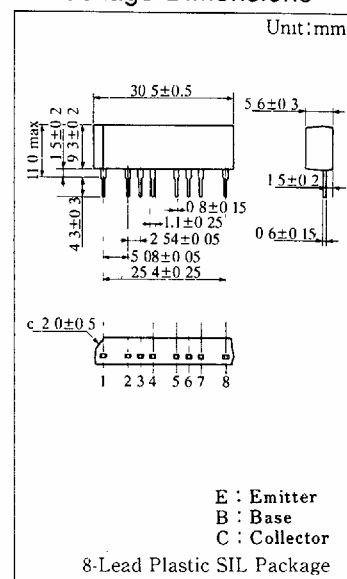
■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of (h_{FE})
- High collector current (I_C)
- 3 PNP elements

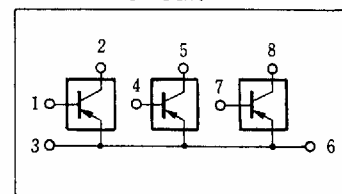
■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-30	V
Emitter-base voltage	V_{EBO}	-6	V
Peak collector current	I_{CP}	-4	A
Collector current	I_C	-2	A
Power dissipation	P_C	20	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

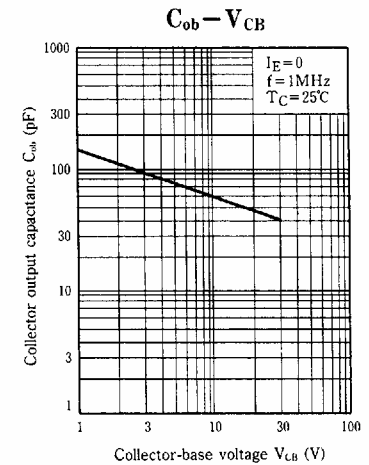
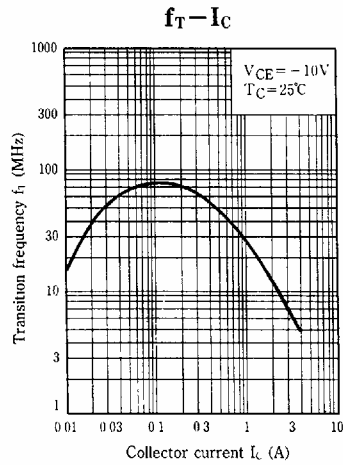
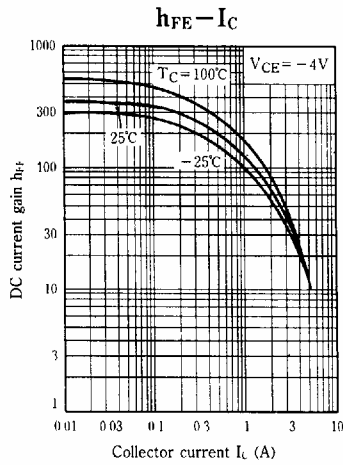
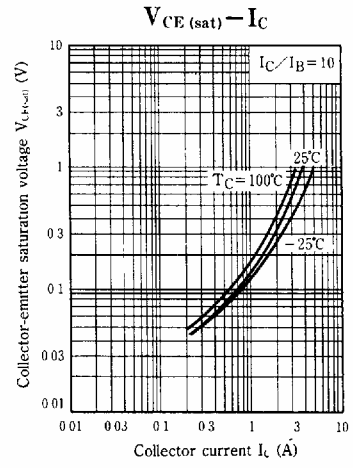
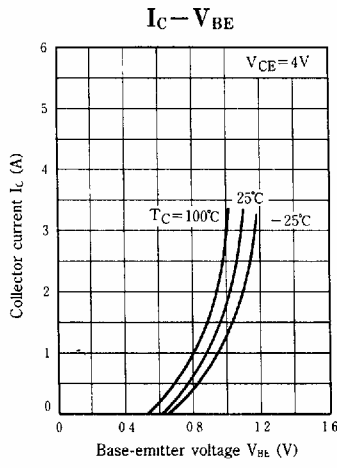
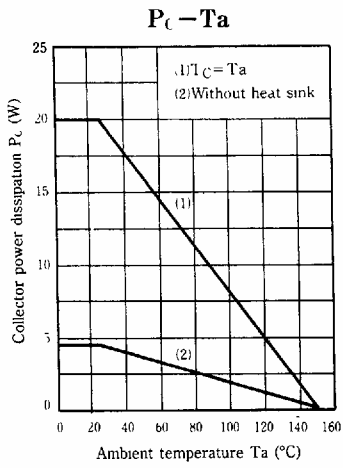


■ Inner Circuit



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CES}	$V_{CE} = -30\text{V}, V_{BF} = 0$			-100	μA
Collector cutoff current	I_{CFO}	$V_{CE} = -15\text{V}, I_B = 0$			-100	μA
Emitter cutoff current	I_{LBO}	$V_{EB} = -6\text{V}, I_C = 0$			-50	μA
Collector-emitter voltage	V_{CE0}	$I_C = -30\text{mA}, I_B = 0$	-30			V
DC current gain	h_{FE}	$V_{CE} = -4\text{V}, I_C = -0.1\text{A}$	35			
		$V_{CE} = -4\text{V}, I_C = -1\text{A}$	80		280	
Base-emitter voltage	V_{BE}	$V_{CE} = -4\text{V}, I_C = -1\text{A}$			-1.2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -0.1\text{A}$			-0.8	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -0.1\text{A}, f = 10\text{MHz}$		80		MHz
Turn-on time	t_{on}	$I_C = -1\text{A}$		0.1		μs
Storage time	t_{stg}	$I_{B1} = -0.1\text{A}, I_{B2} = 0.1\text{A}$		1.3		μs
Collector current fall time	t_f	$V_{CE} = -20\text{V}$		0.3		μs



Safety operation area-forward bias (ASO)

