

PU3121, PU4121, PU4421**Silicon NPN Triple-Diffused Planar Type**

Power Amplifier, Switching

■ Features

- Built-in 30V Zener diode between C and B
- Very small fluctuation in breakdown voltages
- High speed switching
- PU3121: 3 NPN elements
- PU4121: 4 NPN elements
- PU4421: 2 NPN elements

■ Absolute Maximum Ratings (Tc=25°C)

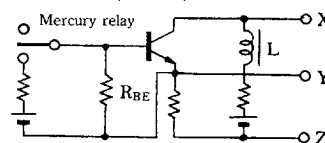
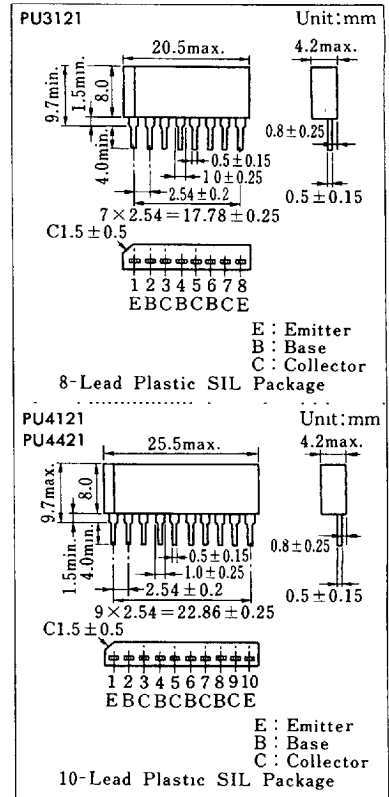
Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	30 ± 5	V
Collector-emitter voltage	V_{CEO}	30 ± 5	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	4	A
Collector current	I_C	2	A
Power dissipation	P_D	15	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 25V, I_E = 0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			2	mA
Collector-emitter voltage	V_{CEO}	$I_C = 5mA, I_B = 0$	25		35	V
DC current gain	h_{FE1}	$V_{CE} = 4V, I_C = 1A$	1000			
	h_{FE2}^{*1}	$V_{CE} = 4V, I_C = 2A$	1000		10000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 8mA$			2.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2A, I_B = 8mA$			2.5	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 0.5A, f = 1MHz$		20		MHz
Turn-on time	t_{on}	$I_C = 2A, I_{B1} = 8mA, I_{B2} = -8mA$		0.4		μs
Storage time	t_{stg}			3		μs
Fall time	t_f			1		μs
Energy handling capability	$E_{s/b}^{*2}$	$I_C = 1.45A, L = 100mH, R_{BE} = 100\Omega$	100			mJ

***¹h_{FE2} Classifications**

Class	Free	Q	P
h _{FE2}	1000 ~ 10000	1000 ~ 5000	2000 ~ 10000

***²E_{s/b} Test circuit (1 circuit)****■ Package Dimensions**

6932852 0017008 456

Inner Circuit

