

PU3124, PU4124, PU4424

Silicon NPN Triple-Diffused Planar Darlington Type

Power Amplifier, Switching

■ Features

- Built-in 60V Zener diode between C and B
- Very small fluctuation in breakdown voltage
- Large energy handling capability
- High speed switching
- PU3124: 3 NPN elements
- PU4124: 4 NPN elements
- PU4424: 2 NPN elements

■ Absolute Maximum Ratings (T_c=25°C)

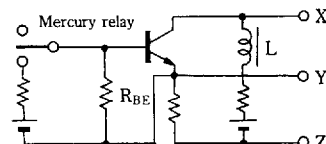
Item	Symbol	Value	Unit
Collector-base voltage	V _{CB0}	60 ± 10	V
Collector-emitter voltage	V _{CE0}	60 ± 10	V
Emitter-base voltage	V _{EB0}	5	V
Peak collector current	I _{CP}	8	A
Collector current	I _C	4	A
Power dissipation	P _D	15	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 ~ +150	°C

■ Electrical Characteristics (T_c=25°C)

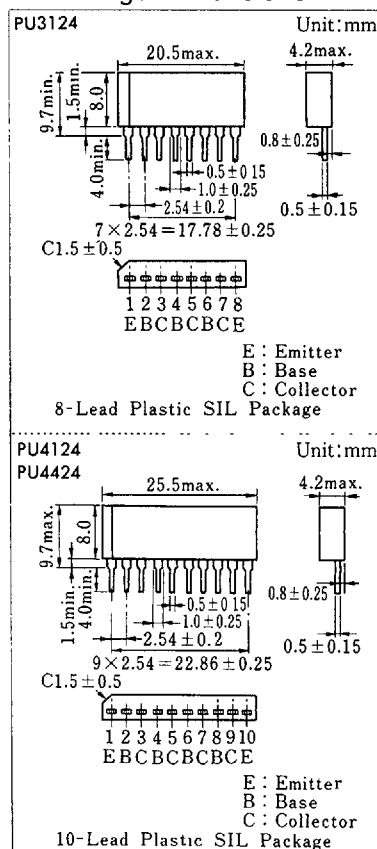
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I _{CBO}	V _{CB} = 50V, I _E = 0			100	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 5V, I _C = 0			2	mA
Collector-emitter voltage	V _{CE0}	I _C = 5mA, I _B = 0	50		70	V
DC current gain	h _{FE1}	V _{CE} = 3V, I _C = 0.5A	1000			
	h _{FE2} *1	V _{CE} = 3V, I _C = 3A	1000		10000	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 3A, I _B = 12mA			2.5	V
		I _C = 5A, I _B = 20mA			4	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 3A, I _B = 12mA			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 = 3A, I _{B1} = 12mA, I _{B2} = -12mA		0.3		μs
Storage time	t _{stg}			3		μs
Fall time	t _f			1		μs
Energy handling capability	E _b *2	I _C = 1A, L = 100mH, R _{BE} = 100 Ω	50			mJ

*1 h_{FE2} Classifications

Class	Free	Q	P
h _{FT2}	1000 ~ 10000	1000 ~ 5000	2000 ~ 10000

*2 E_{S/b} Test circuit (1 circuit)

■ Package Dimensions



6932852 0017014 75T

Inner Circuit

