

PU3123, PU4123, PU4423

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
- PU3123: 3 NPN elements
- PU4123: 4 NPN elements
- PU4423: 2 NPN elements

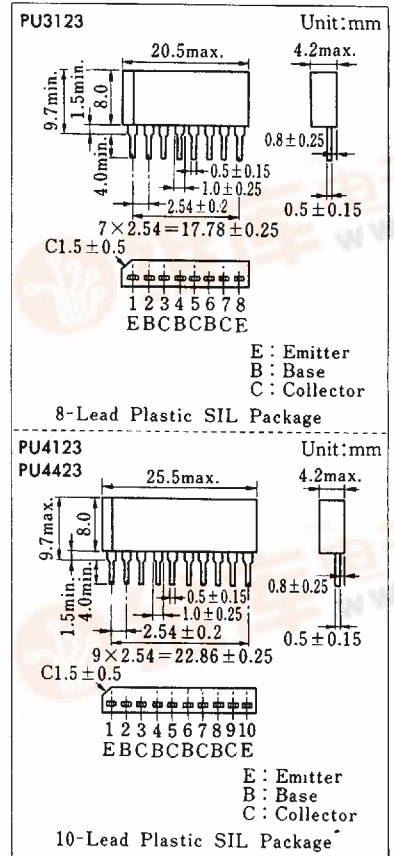
■ Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V _{CBO}	60 ± 10	V
Collector-emitter voltage	V _{CEO}	60 ± 10	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 _{CBO} = 50V, 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	50		70	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 h*2	I _C = 1A, L = 100mH, R _{BE} = 100Ω	25			mJ

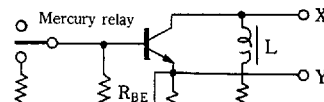
■ Package Dimensions



PDF Classifications

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

*2E_s/h Test circuit (1 circuit)



Power Transistor Arrays

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Inner Circuit

