

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 (Tc=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V _{CB0}	60±10	V
Collector-emitter voltage	V _{CEO}	60±10	V
Emitter-base voltage	V _{EBO}	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

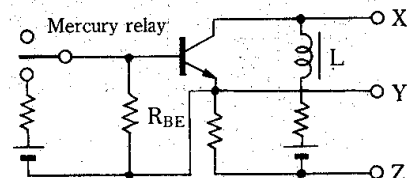
■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit	
Collector cutoff current	I _{CB0}	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 _{CEO}	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 _{s b} *2	I _C =1A, L=100mH, R _{BE} =100Ω	50			mJ	

*1 h_{FE2} Classifications

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

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



■ Package Dimensions

