PU3211, PU4211, PU4511

Silicon NPN Epitaxial Planar Type

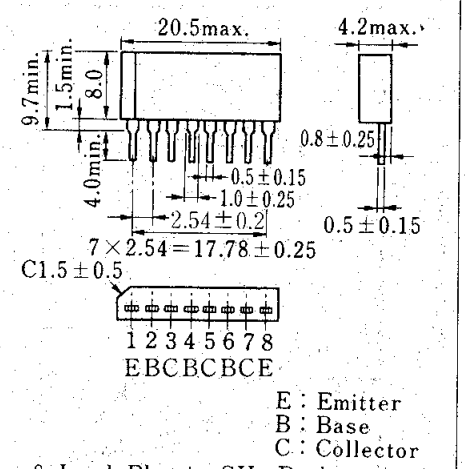
Power Amplifier, Switching
Complementary Pair with PU3111, PU4111, PU4411

■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of DC current gain (h_{FE})
- High collector current (I_C)
- PU3211: 3 NPN elements
- PU4211: 4 NPN elements
- PU4511: 2 NPN elements (4 elements in total)

■ Package Dimensions

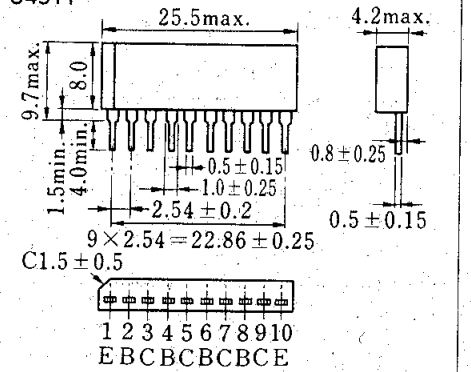
PU3211 Unit:mm



E : Emitter
B : Base
C : Collector

8-Lead Plastic SIL Package

PU4211
PU4511 Unit:mm



E : Emitter
B : Base
C : Collector

10-Lead Plastic SIL Package

■ Absolute Maximum Ratings (Tc=25°C)

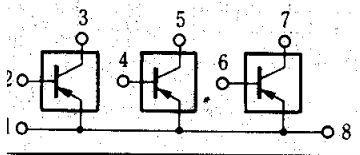
Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	−60	V
Collector-emitter voltage	V_{CEO}	−60	V
Emitter-base voltage	V_{EBO}	−5	V
Peak collector current	I_{CP}	−8	A
Collector current	I_C	−4	A
Power dissipation	P_D	15	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55~+150	°C

■ Electrical Characteristics (Tc=25°C)

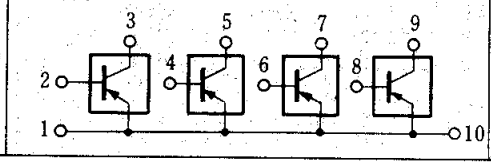
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CES}	$V_{CE}=-60V$, $V_{BE}=0$			−400	μA
	I_{CEO}	$V_{CE}=-30V$, $I_B=0$			−700	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=-5V$, $I_C=0$			−1	V
Collector-emitter voltage	V_{CEO}	$I_C=-30mA$, $I_B=0$	−60			V
DC current gain	h_{FE1}	$V_{CE}=-4V$, $I_C=-1A$	70		250	
	h_{FE2}	$V_{CE}=-4V$, $I_C=-3A$	15			
Base-emitter voltage	V_{BE}	$V_{CE}=-4V$, $I_C=-3A$			−2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-4A$, $I_B=-0.4A$			−1.5	V
Transition frequency	f_T	$V_{CE}=-10V$, $I_C=-0.1A$, f=1MHz		20		MHz
Turn-on time	t_{on}	$I_C=-4A$, $I_{B1}=-0.4A$, $I_{B2}=0.4A$		0.2		μs
Storage time	t_{stg}			0.5		μs
Fall time	t_f			0.2		μs

■ Inner Circuit

PU3211



PU4211



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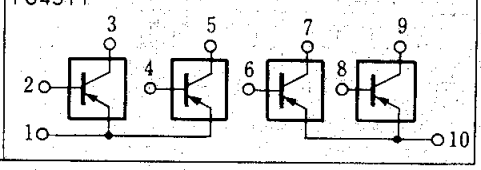

Panasonic