

PU42C26

Silicon NPN Epitaxial Planar Type

Power Amplifier

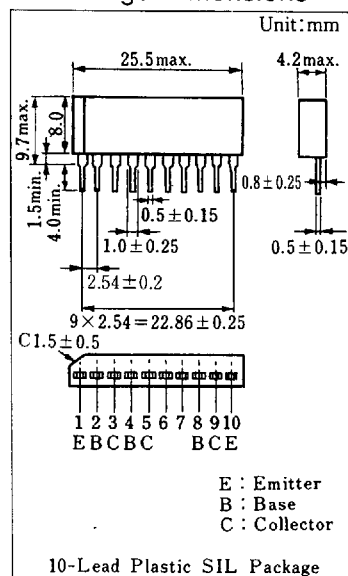
■ Features

- High DC current gain (h_{FE})
- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- 3 PNP elements

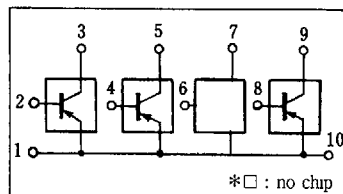
■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-60	V
Collector-emitter voltage	V_{CEO}	-60	V
Emitter-base voltage	V_{EBO}	-6	V
Peak collector current	I_{CP}	-4	A
Collector current	I_C	-2	A
power dissipation ($T_c=25^\circ\text{C}$)	P_C	15	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

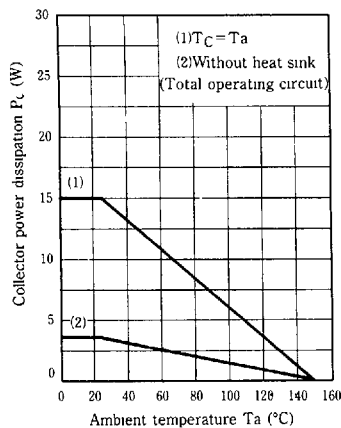
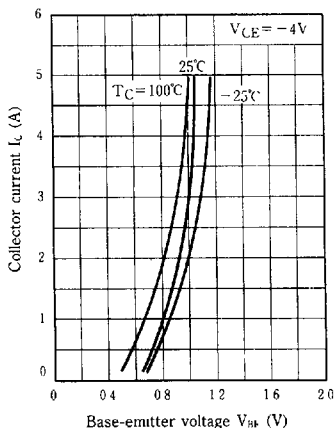
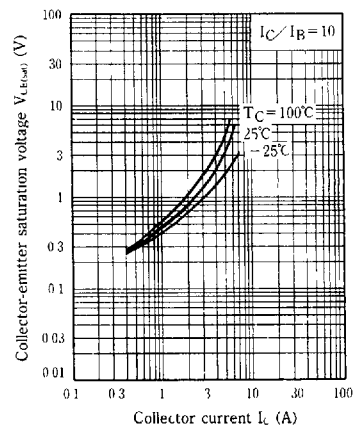
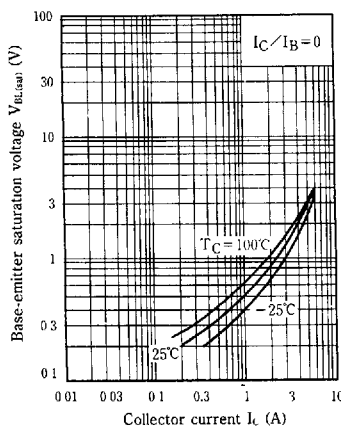
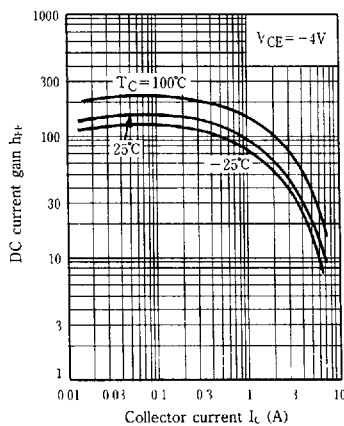
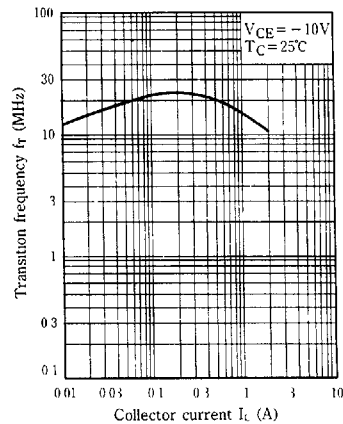
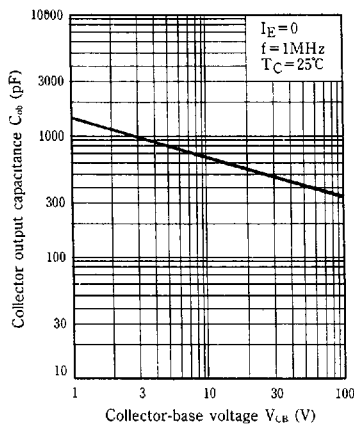


■ Inner Circuit



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CES}	$V_{CE} = -60\text{V}, V_{BE} = 0$			-200	μA
Collector cutoff current	I_{CEO}	$V_{CE} = -30\text{V}, I_B = 0$			-300	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$			-1	mA
Collector-emitter voltage	V_{CE0}	$I_C = -30\text{mA}, I_B = 0$	-60			V
DC current gain	h_{FE1}	$V_{CE} = -4\text{V}, I_C = -0.1\text{A}$	35			
	h_{FE2}	$V_{CE} = -4\text{V}, I_C = -1\text{A}$	100		280	
Base-emitter voltage	V_{BF}	$V_{CE} = -4\text{V}, I_C = -1\text{A}$			-1.2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$			-2.0	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -0.5\text{A}, f = 10\text{MHz}$		25		MHz
Turn-on time	t_{on}	$I_C = -1\text{A}$		0.1		μs
Storage time	t_{stg}	$I_{B1} = -0.1\text{A}, I_{B2} = 0.1\text{A}$		1.5		μs
Collector current fall time	t_f	$V_{CC} = -50\text{V}$		0.3		μs

$P_C - T_a$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$ 

Safety operation area-forward bias (ASO)

