

2SC4545

Silicon NPN Epitaxial Planar Type

Medium Power Amplifier

Complementary Pair with 2SB1413

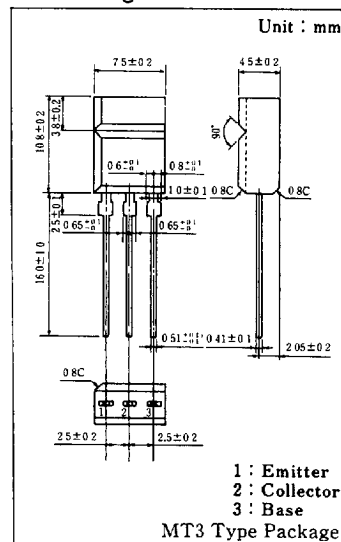
■ Feature

- Automatic mounting by radial taping is possible

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EB0}	5	V
Peak collector current	I_{CP}	3	A
Collector current	I_C	1.5	A
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	- 55 ~ + 150	°C

■ Package Dimensions



■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=20\text{ V}, I_E=0$			1	μA
	I_{CEO}	$V_{CE}=10\text{ V}, I_B=0$			100	
Emitter cutoff current	I_{EBO}	$V_{EB}=5\text{ V}, I_C=0$			10	μA
Collector-base voltage	V_{CBO}	$I_C=1\text{ mA}, I_E=0$	50			V
Collector-emitter voltage	V_{CEO}	$I_C=2\text{ mA}, I_B=0$	40			V
DC current gain	h_{FE}^{*1}	$V_{CE}=5\text{ V}, I_C=1\text{ A}^{*2}$	50		220	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{ A}, I_B=0.2\text{ A}^{*2}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{ A}, I_B=0.2\text{ A}^{*2}$			1.5	V
Transition frequency	f_T	$V_{CB}=5\text{ V}, I_E=-0.5\text{ A}^{*2}, f=200\text{ MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB}=20\text{ V}, I_E=0, f=1\text{ MHz}$		35		pF

*2 Pulse measurement

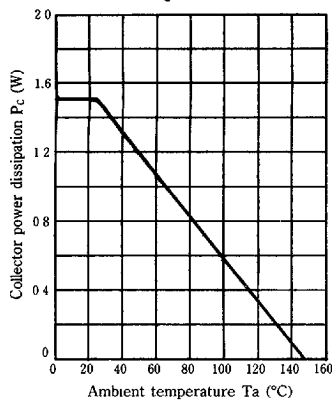
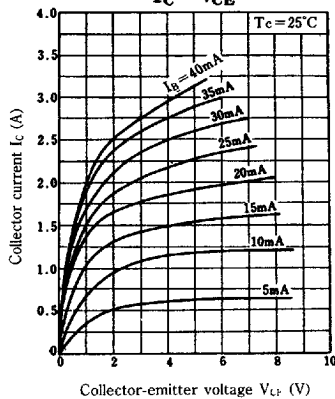
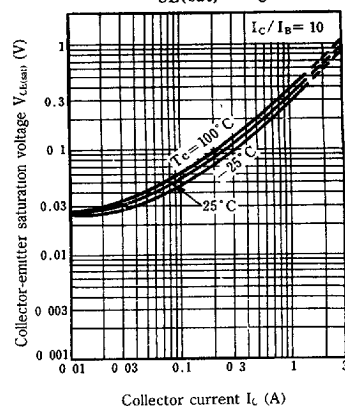
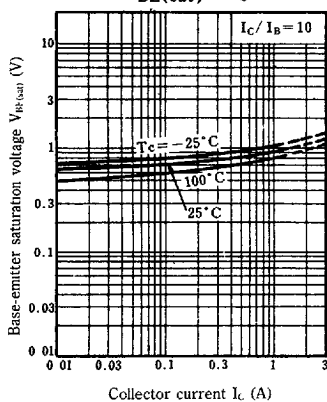
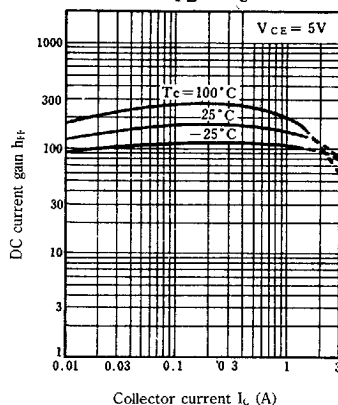
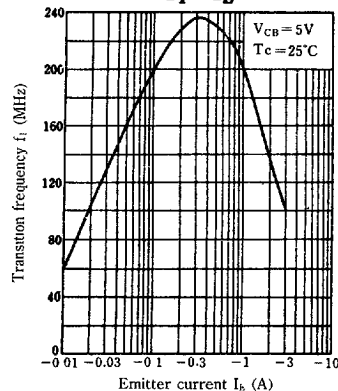
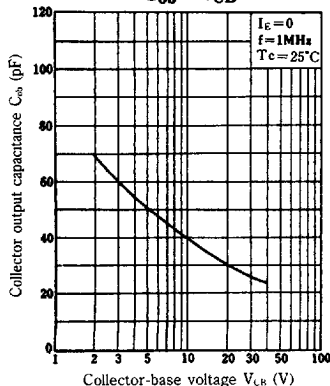
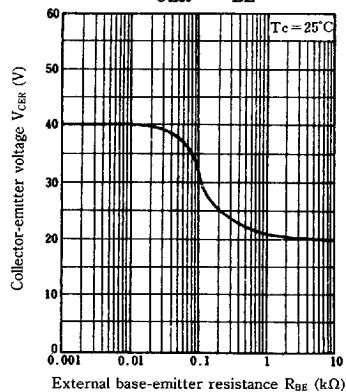
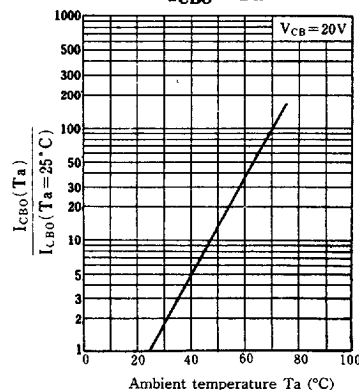
* $^1h_{FE}$ Classifications

Class	P	Q	R
h _{FE}	50~100	80~160	120~220

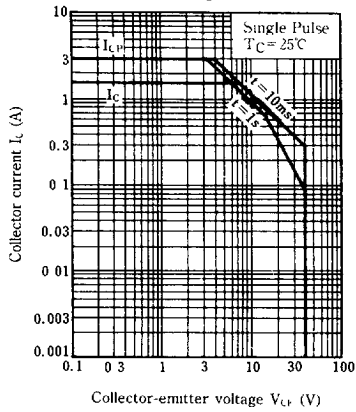
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Panasonic

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

Area of safe operation (ASO)

 $R_{th}(t) - t$ 