

**Silicon NPN transistor epitaxial type
D5974**

[Applications]

Portable radio 2W output amplifier of class-B push-pull operation
Medium power switching and muting

[Feature]

Correspond to SS8050
High collector current $I_C = 1.5A$
Complimentary pair with phenitec P/N B5974

[Absolute maximum ratings (Ta=25C)]

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	40	V
Collector-emitter voltage	VCEO	25	V
Emitter-base voltage	VEBO	6	V
Collector current	I_C	1.5	A
Junction temperature	T_j	150	C
Storage temperature	T_{stg}	-55 to 150	C

[Electrical characteristics (Ta=25C)]

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	40	-	-	V	$I_C = 100\mu A, I_E = 0A$
Collector-emitter breakdown voltage	BVCEO	25	-	-	V	$I_C = 2mA, I_B = 0A$
Emitter-base breakdown voltage	BVEBO	6	-	-	V	$I_E = 100\mu A, I_C = 0A$
Collector cut-off current	I_{CBO}	-	-	100	nA	$V_{CB} = 40V, I_E = 0A$
Emitter cut-off current	I_{EBO}	-	-	100	nA	$V_{EB} = 6V, I_E = 0A$
DC current gain 1	h_{FE1}	45	-	-	-	$V_{CE} = 1V, I_C = 5mA$
DC current gain 2	h_{FE2}	85	160	300	-	$V_{CE} = 1V, I_C = 100mA$
DC current gain 3	h_{FE3}	40	-	-	-	$V_{CE} = 1V, I_C = 800mA$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.28	0.5	V	$I_C = 800mA, I_B = 80mA$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	0.98	1.2	V	$I_C = 800mA, I_B = 80mA$
Base-emitter on voltage	$V_{BE(on)}$	-	0.66	1	V	$V_{CE} = 1V, I_C = 10mA$
Transition frequency	f_T	100	300	-	MHz	$V_{CE} = 10V, I_E = -50mA$
Collector output capacitance	C_{ob}	-	6.5	-	pF	$V_{CB} = 10V, f = 1MHz, I_E = 0A$

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.

Fig.1 hFE - IC
at VCE= 1V, Ta= 25C

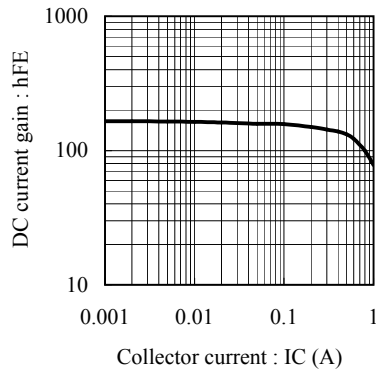


Fig.2 VCE(sat) - IC
at IC/IB= 10, Ta= 25C

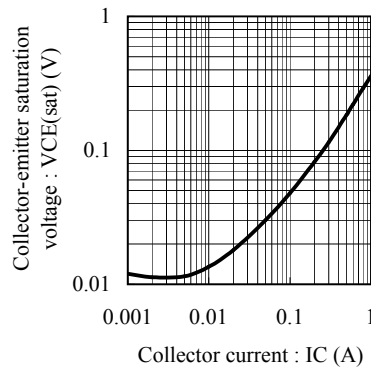


Fig.3 VBE(sat) - IC
at IC/IB=10, Ta= 25C

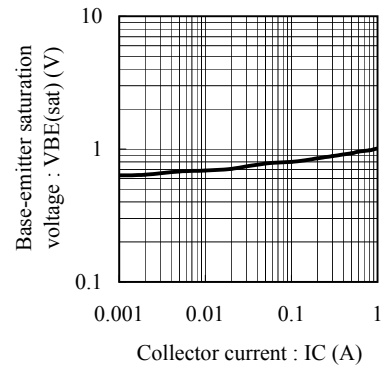


Fig.4 fT - IE
at VCE= 10V, Ta= 25C

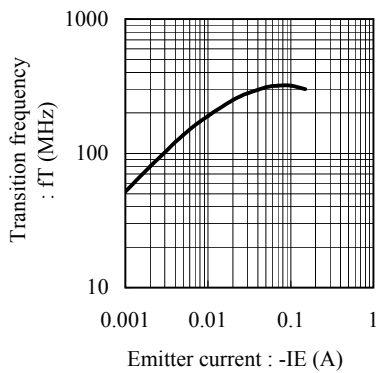


Fig.5 Cob - VCB
at f= 1MHz, Ta= 25C

