

## 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	IC	1.5	A
Junction temperature	Tj	150	C
Storage temperature	Tstg	-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	ICBO	-	-	100	nA	$V_{CB} = 40V, I_E = 0A$
Emitter cut-off current	IEBO	-	-	100	nA	$V_{EB} = 6V, I_E = 0A$
DC current gain 1	hFE 1	45	-	-	-	$V_{CE} = 1V, I_C = 5mA$
DC current gain 2	hFE 2	85	160	300	-	$V_{CE} = 1V, I_C = 100mA$
DC current gain 3	hFE 3	40	-	-	-	$V_{CE} = 1V, I_C = 800mA$
Collector-emitter saturation voltage	VCE(sat)	-	0.28	0.5	V	$I_C = 800mA, I_B = 80mA$
Base-emitter saturation voltage	VBE(sat)	-	0.98	1.2	V	$I_C = 800mA, I_B = 80mA$
Base-emitter on voltage	VBE(on)	-	0.66	1	V	$V_{CE} = 1V, I_C = 10mA$
Transition frequency	fT	100	300	-	MHz	$V_{CE} = 10V, I_E = -50mA$
Collector output capacitance	Cob	-	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

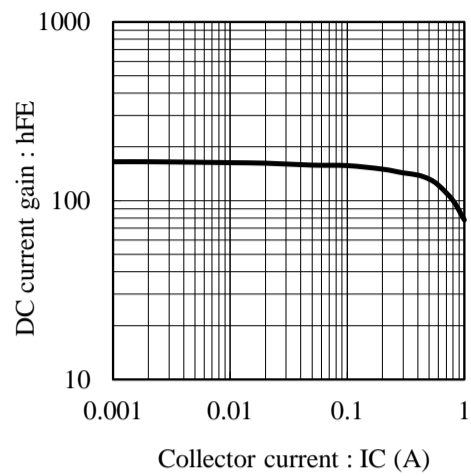


Fig.2 VCE(sat) - IC  
at IC/IB= 10, Ta= 25C

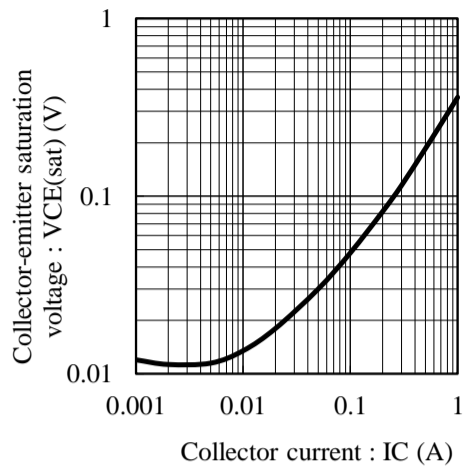


Fig.3 VBE(sat) - IC  
at IC/IB=10, Ta= 25C

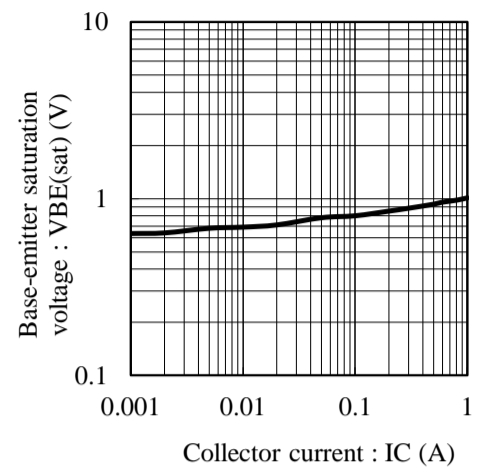


Fig.4 fT - IE  
at VCE= 10V, Ta= 25C

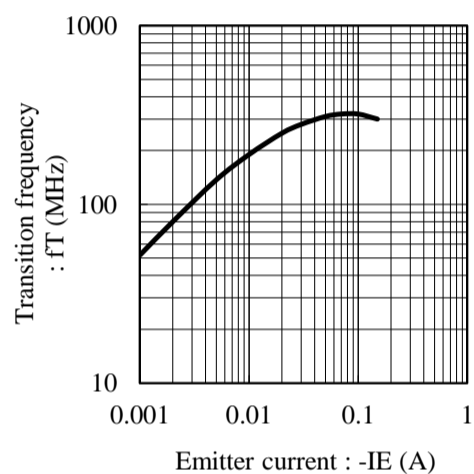


Fig.5 Cob - VCB  
at f= 1MHz, Ta= 25C

