Ordering number : EN 544G

SANYO

No.544G

2SA1011/2SC2344

PNP/NPN Epitaxial Planar Silicon Transistors
High-Voltage Switching, AF Power Amp,
100W Output Predriver Applications

( ) : 2SA1011

Maximum Ratings at Ta=25℃

				unit
Collector-to-Base Voltage	V_{CBO}		(−) 180	V
Collector-to-Emitter Voltage	V_{CEO}		(−) 160	V
Emitter-to-Base Voltage	V_{EBO}		(−) 6	V
Collector Current	I_C		(−) 1.5	A
Collector Current (Pulse)	I_{CP}		(−) 3	A
Collector Dissipation	P_C	Tc=25℃	25	W
Junction Temperature	Tj		150	℃
Storage Temperaure	Tstg		− 55 to + 150	℃

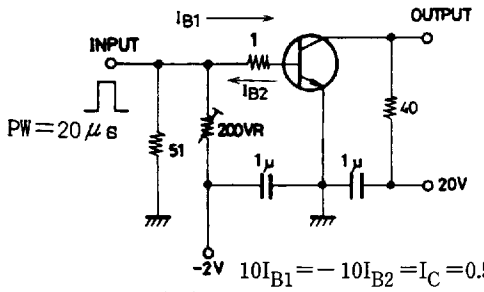
Electrical Characteristics at Ta=25℃

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}= (−) 120V, I_E=0			(−) 10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}= (−) 4V, I_C=0			(−) 10	μA
DC Current Gain	h_{FE}	V_{CE}= (−) 5V, I_C= (−) 300mA	60 ※		200 ※	
Gain-Bandwidth Product	f_T	V_{CE}= (−) 10V, I_C= (−) 50mA		100		MHz
Output Capacitance	Cob	V_{CB}= (−) 10V, f=1MHz		(30)		pF
				23		pF
Base-to-Emitter Voltage	V_{BE}	V_{CE}= (−) 5V, I_C= (−) 10mA		(−) 1.5		V
C-E Saturation Voltage	$V_{CE\ (sat)}$	I_C= (−) 500mA, I_B= (−) 50mA		(− 0.5)		V
				0.3		V
C-B Breakdown Voltage	$V_{(BR)\ CBO}$	I_C= (−) 1mA, I_E=0	(−) 180			V
C-E Breakdown Voltage	$V_{(BR)\ CEO}$	I_C= (−) 1mA, I_{BE}=∞	(−) 160			V
E-B Breakdown Voltage	$V_{(BR)\ EBO}$	I_E= (−) 1mA, I_C=0	(−) 6			V
Turn-ON Time	t_{on}	See specified Test Circuit.		(0.29) 0.15		μs
Fall Time	t_f	〃		(0.19) 0.48		μs
Storage Time	t_{stg}	〃		(0.48) 0.81		μs

※ The 2SA1011/2SC2344 are classified by 300mA h_{FE} as follows :

60 D 120	100 E 200

Swithing Time Test Circuit



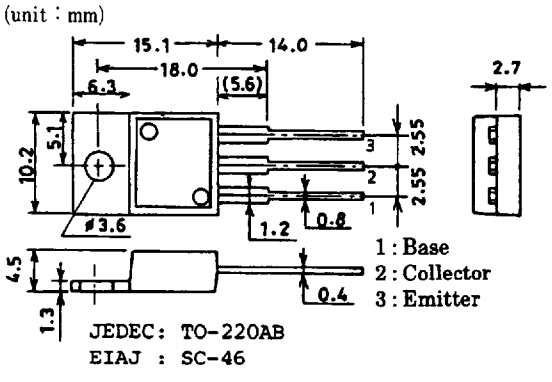
$10I_{B1} = -10I_{B2} = I_C = 0.5A$

(For PNP,the polarity is reversed.)

unit (Resistance : Ω , Capasitance : F)

Package Dimensions 2010C

(unit : mm)



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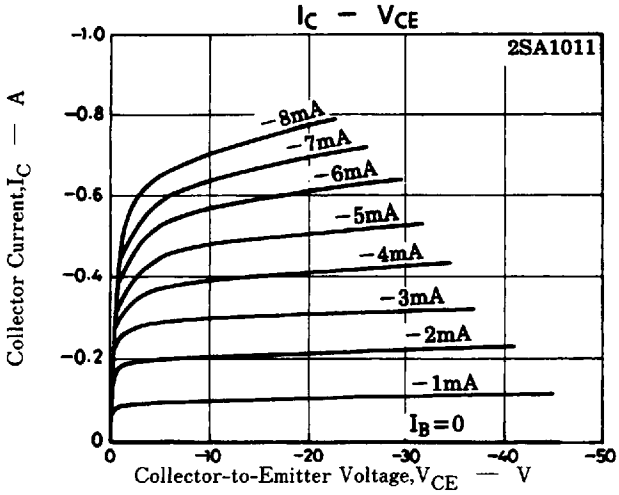
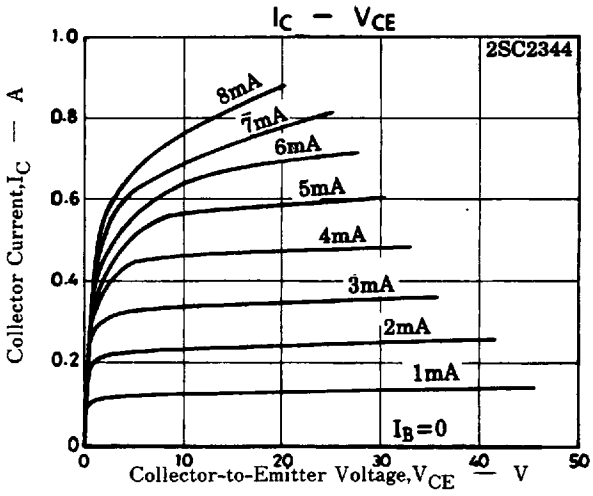
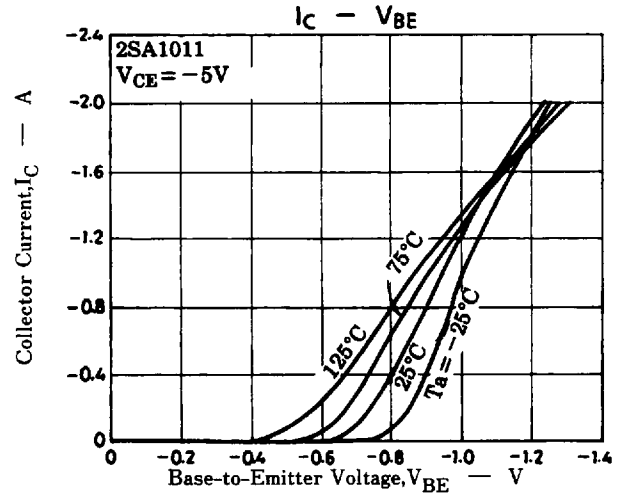
$I_C - V_{CE}$



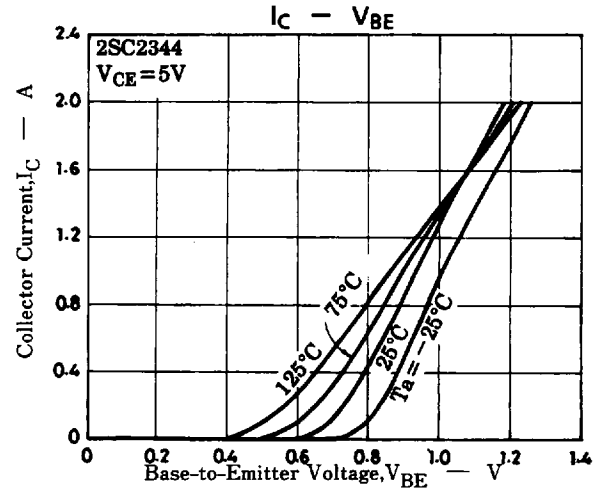
$I_C - V_{CE}$



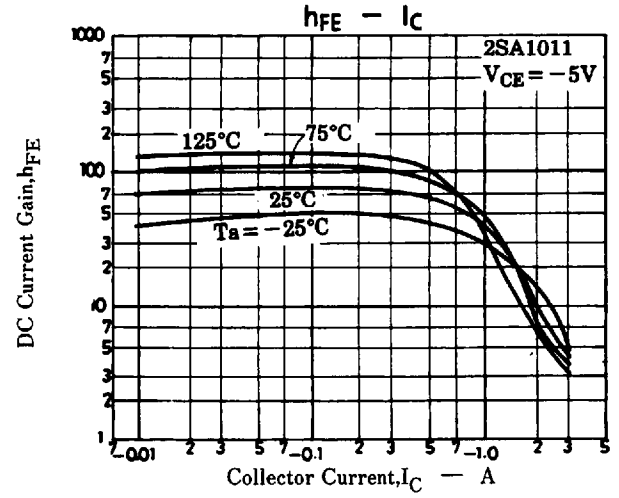
$I_C - V_{BE}$



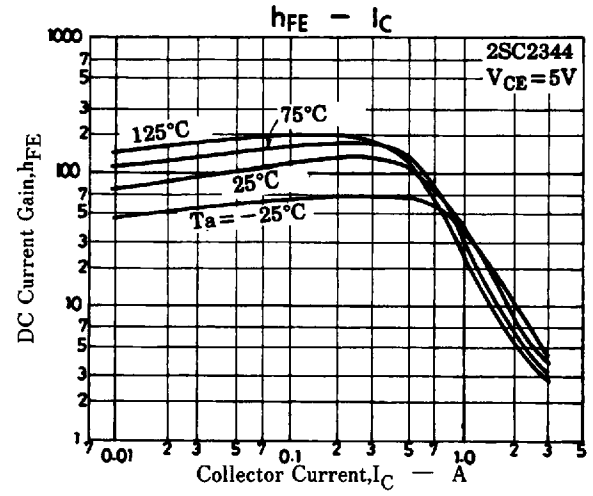
$I_C - V_{BE}$



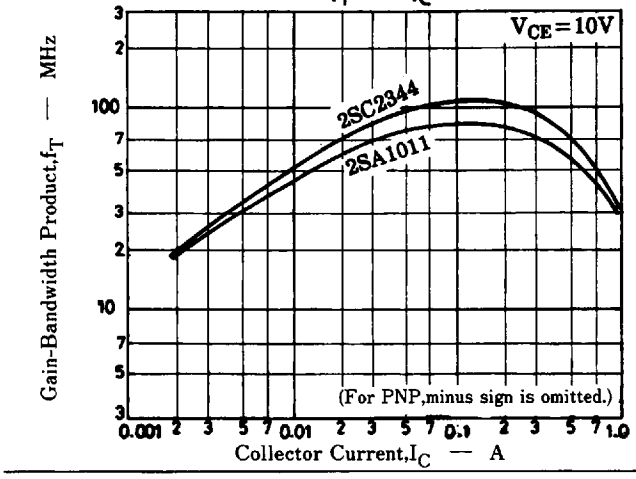
$h_{FE} - I_C$



$h_{FE} - I_C$



$f_T - I_C$



Cob — V_{CB}