

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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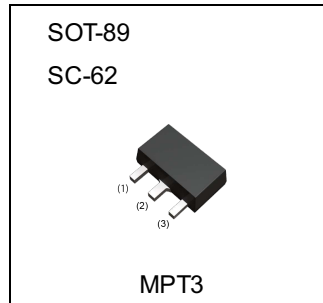
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

Parameter	Value
V_{CEO}	400V
I_C	100mA

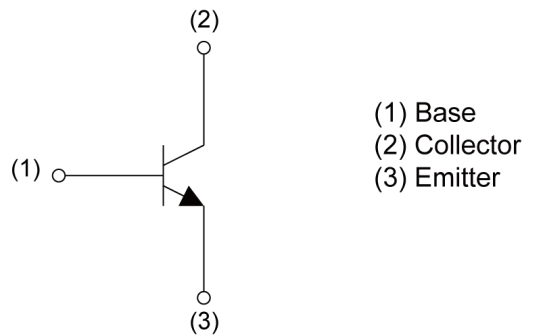
●Outline



●Features

- 1) Complementary PNP Types: 2SAR340P
- 2) Low $V_{CE(sat)}$
 $V_{CE(sat)} = 300\text{mV (Max)}$
 $(I_C/I_B = 20\text{mA}/2\text{mA})$

●Inner circuit



●Application

LOW FREQUENCY AMPLIFIER

●Packaging specifications

Part No.	Package	Package size	Taping code	Reel size (mm)	Tape width (mm)	Basic ordering unit.(pcs)	Marking
2SCR346P	SOT-89 (MPT3)	4540	T100	180	12	1000	HK

● **Absolute maximum ratings** ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Values	Unit
Collector-base voltage	V_{CBO}	400	V
Collector-emitter voltage	V_{CEO}	400	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	100	mA
	I_{CP}^{*1}	200	mA
Base current	I_B	30	mA
Power dissipation	P_D^{*2}	0.5	W
	P_D^{*3}	2.0	W
Junction temperature	T_j	150	$^\circ\text{C}$
Range of storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

● **Electrical characteristics** ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu\text{A}$	400	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1\text{mA}$	400	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu\text{A}$	7	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = 400\text{V}$	-	-	10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6\text{V}$	-	-	10	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20\text{mA}, I_B = 2\text{mA}$	-	100	300	mV
DC current gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	82	-	270	-
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$	-	6	-	pF

h_{FE} values are classified as follows :

rank	P	Q	-	-	-
h_{FE}	82-180	120-270	-	-	-

*1 $P_w=10\text{ms}$ Single Pulse

*2 Each terminal mounted on a reference land.

*3 Mounted on a $40 \times 40 \times 0.7\text{mm}$ ceramic board.

● Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig.1 Grounded Emitter Propagation Characteristics

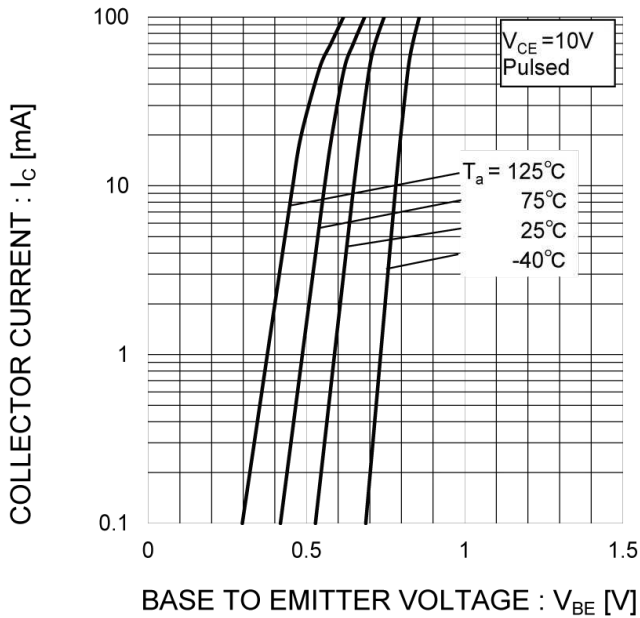


Fig.2 Typical Output Characteristics

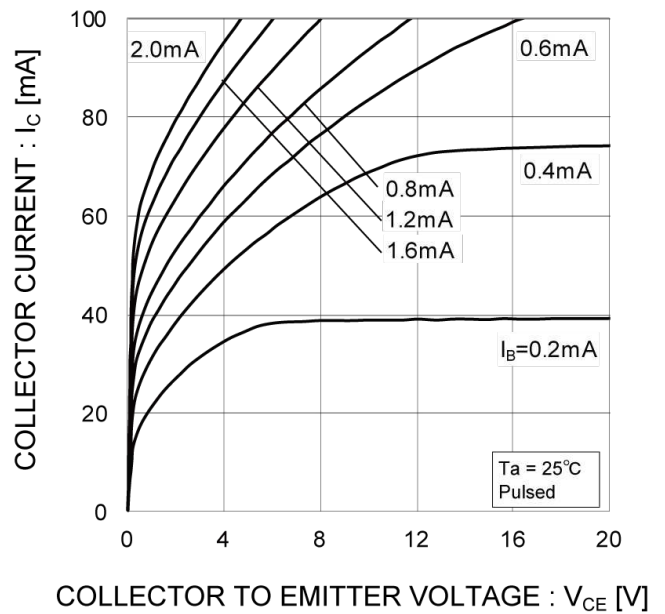


Fig.3 DC Current Gain vs Collector Current(I)

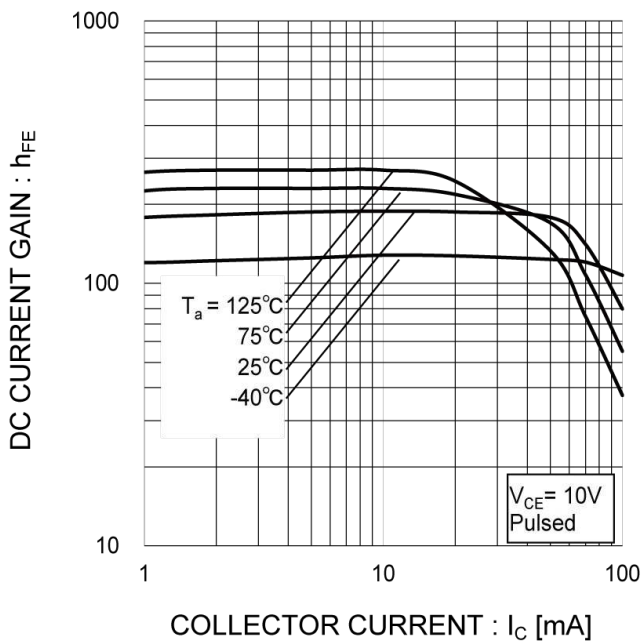
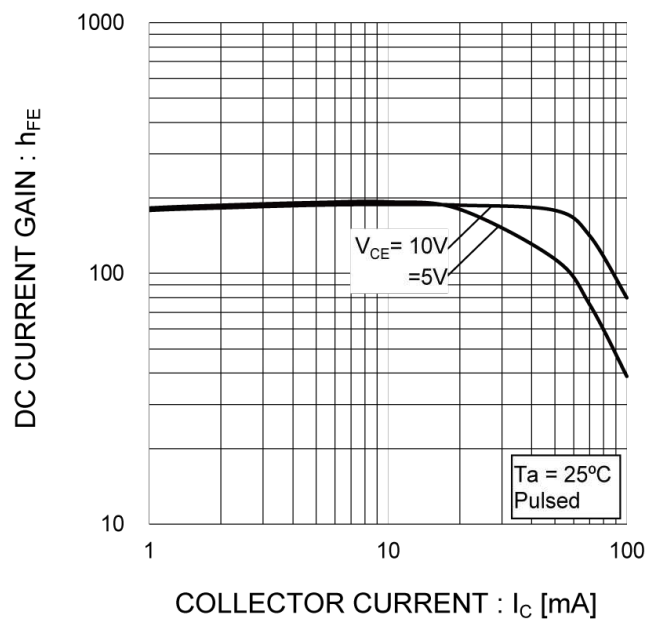


Fig.4 DC Current Gain vs Collector Current(II)



● Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig.5 Collector-Emitter Saturation Voltage vs. Collector-Emitter Saturation Voltage vs. Collector Current (I)

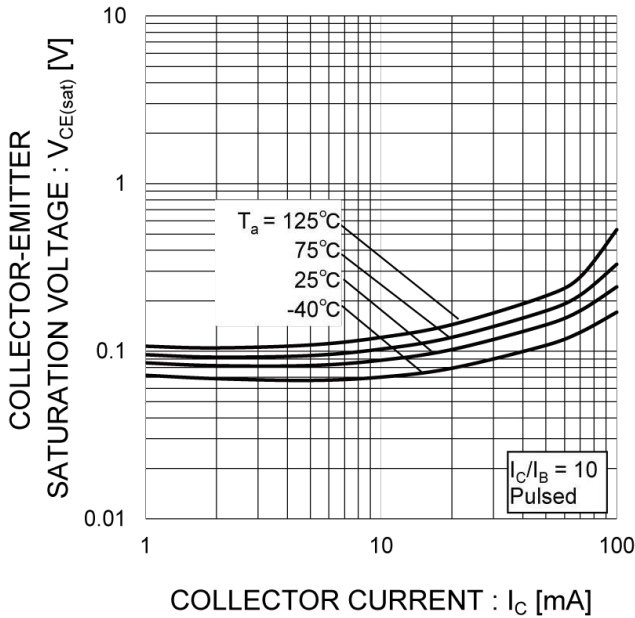


Fig.6 Collector-Emitter Saturation Voltage vs. Collector-Emitter Saturation Voltage vs. Collector Current (II)

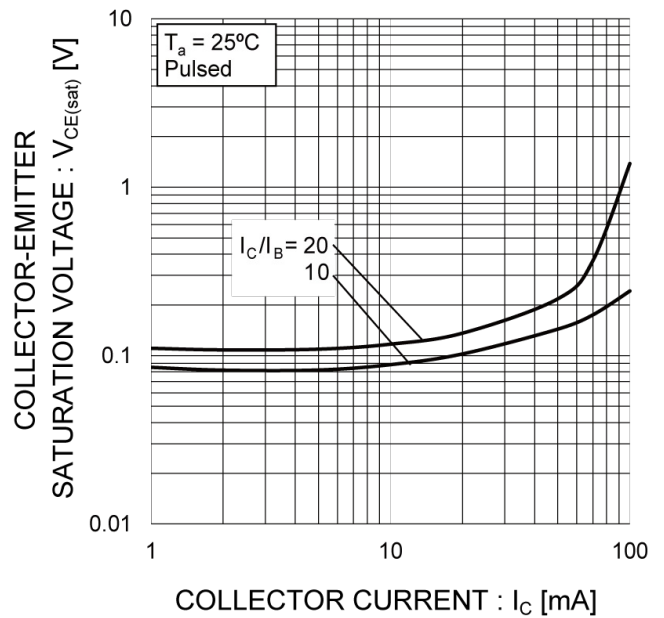


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

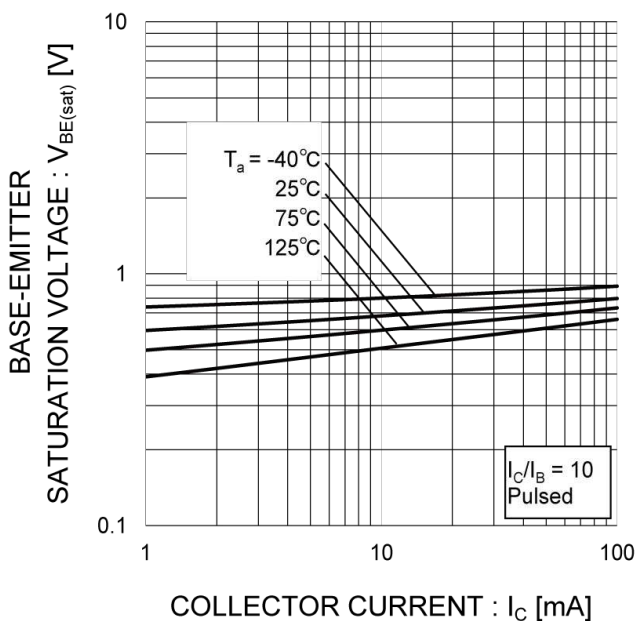
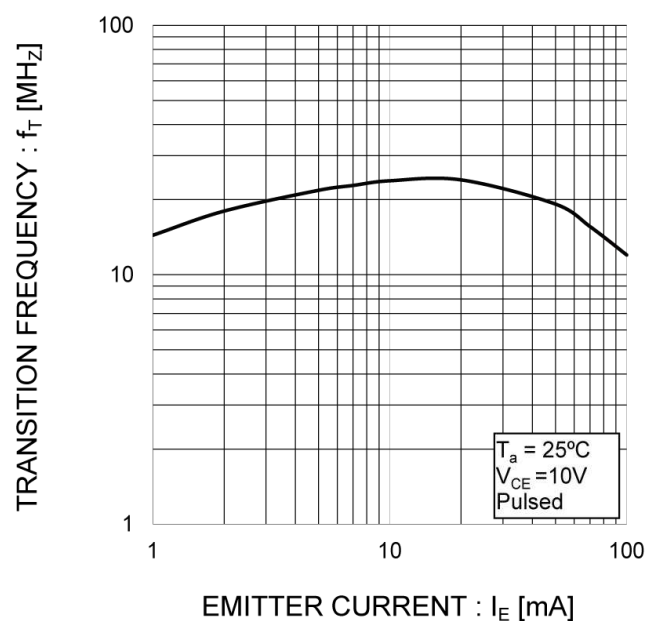


Fig.8 Gain Bandwidth Product vs. Emitter Current



● Electrical characteristic curves ($T_a = 25^\circ\text{C}$)

Fig.9 Emitter input capacitance vs. Emitter-Base Voltage
Collector output capacitance vs. Collector-Base Voltage

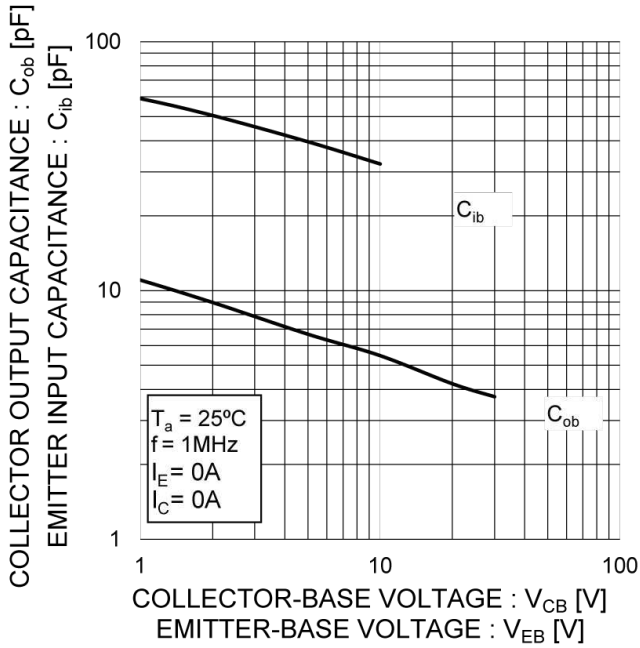
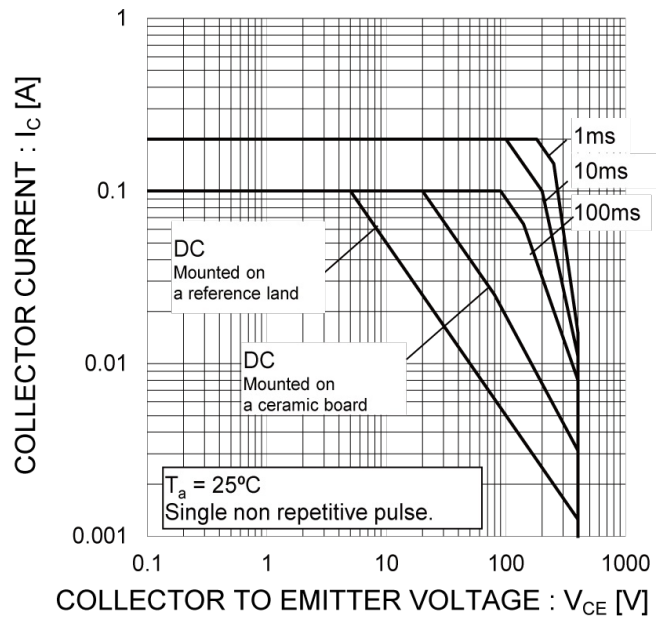
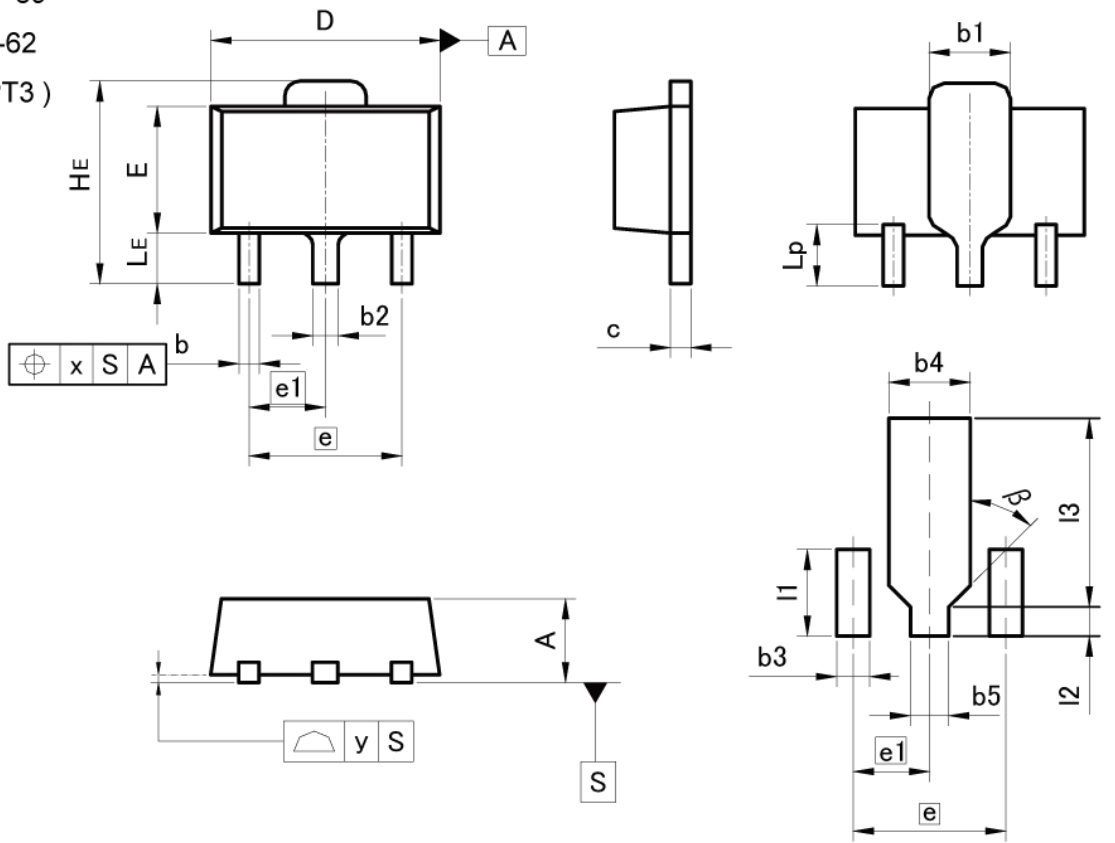


Fig.10 Safe Operating Area



●Dimensions

SOT-89
SC-62
(MPT3)



Pattern of terminal position areas
[Not a pattern of soldering pads]

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.40	1.50	0.055	0.059
b	0.30	0.50	0.012	0.020
b1	1.50	1.70	0.059	0.067
b2	0.40	0.60	0.016	0.024
c	0.35	0.50	0.014	0.020
D	4.40	4.70	0.173	0.185
E	2.40	2.70	0.094	0.106
e	3.00		0.118	
e1	1.50		0.059	
HE	3.70	4.30	0.146	0.169
LE	0.80	1.20	0.031	0.047
Lp	1.01	1.41	0.040	0.056
x	-	0.15	-	0.006
y	-	0.10	-	0.004

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
b3	-	0.65	-	0.026
b4	-	1.70	-	0.067
b5	-	0.75	-	0.030
l1	-	1.71	-	0.067
l2	-	0.58	-	0.023
l3	-	3.72	-	0.146
β	45°		45°	

Dimension in mm/inches

Notes

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