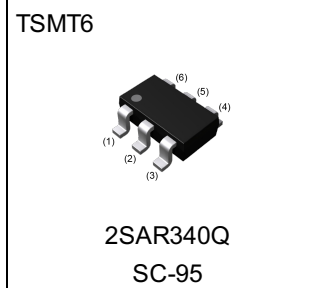


Parameter	Value
V_{CEO}	-400V
I_C	-100mA

●Outline

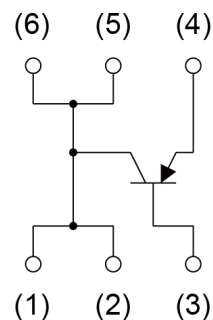


●Features

- 1) Complementary NPN Types : 2SCR341Q.
- 2) Low $V_{CE(sat)}$
 $V_{CE(sat)} = -400mV(Max.)$
 $(I_C/I_B = -20mA/-2mA)$

●Inner circuit

- (1) Collector
- (2) Collector
- (3) Base
- (4) Emitter
- (5) Collector
- (6) Collector



●Application

LOW FREQUENCY AMPLIFIER

●Packaging specifications

Part No.	Package	Package size	Taping code	Reel size (mm)	Tape width (mm)	Basic ordering unit.(pcs)	Marking
2SAR340Q	TSMT6	2928	TR	180	8	3000	HA

●Notice

Pay attention to electric discharge with high voltage because of fine pin pitch.

● 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}	1.25	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}	$I_{\text{C}} = -100\mu\text{A}$	-400	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	$I_{\text{C}} = -1\text{mA}$	-400	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	$I_{\text{E}} = -100\mu\text{A}$	-7	-	-	V
Collector cut-off current	I_{CBO}	$V_{\text{CB}} = -400\text{V}$	-	-	-10	μA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}} = -6\text{V}$	-	-	-10	μA
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = -20\text{mA}$, $I_{\text{B}} = -2\text{mA}$	-	-150	-400	mV
DC current gain	h_{FE}	$V_{\text{CE}} = -10\text{V}$, $I_{\text{C}} = -10\text{mA}$	82	-	270	-
Output capacitance	C_{ob}	$V_{\text{CB}} = -10\text{V}$, $I_{\text{E}} = 0\text{A}$, $f = 1\text{MHz}$	-	15	-	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 ceramic board (25×25×0.8 mm)

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

Fig.1 Grounded Emitter Propagation Characteristics

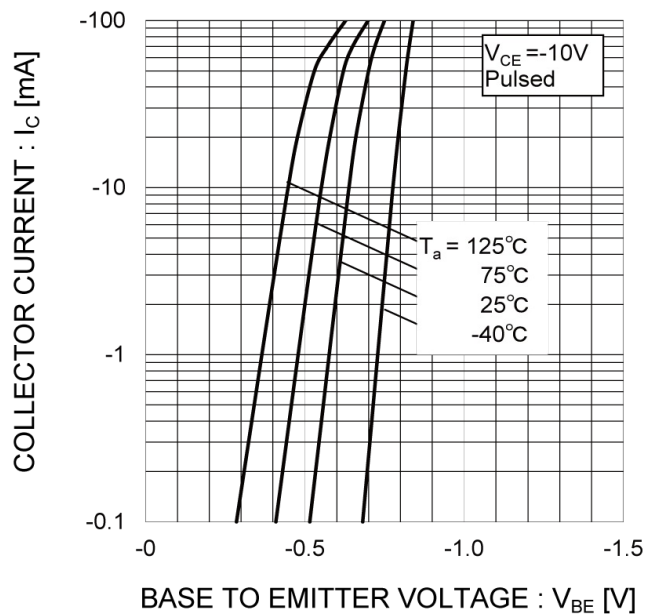


Fig.2 Typical Output Characteristics

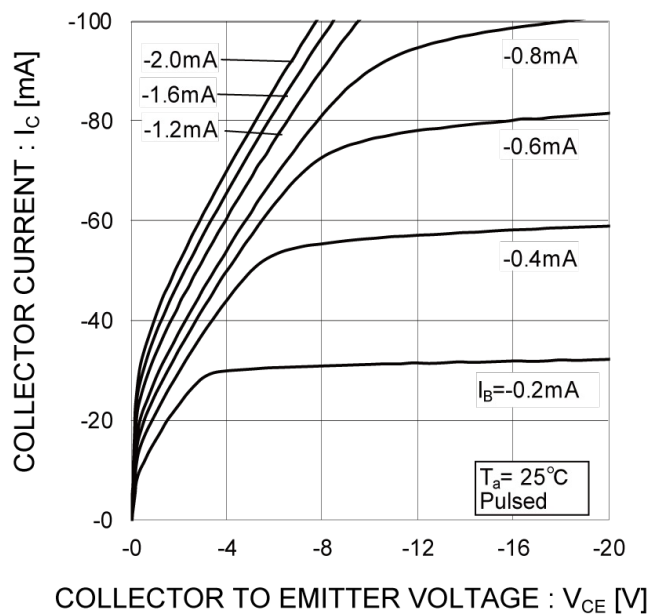


Fig.3 DC Current Gain vs. Collector Current(I)

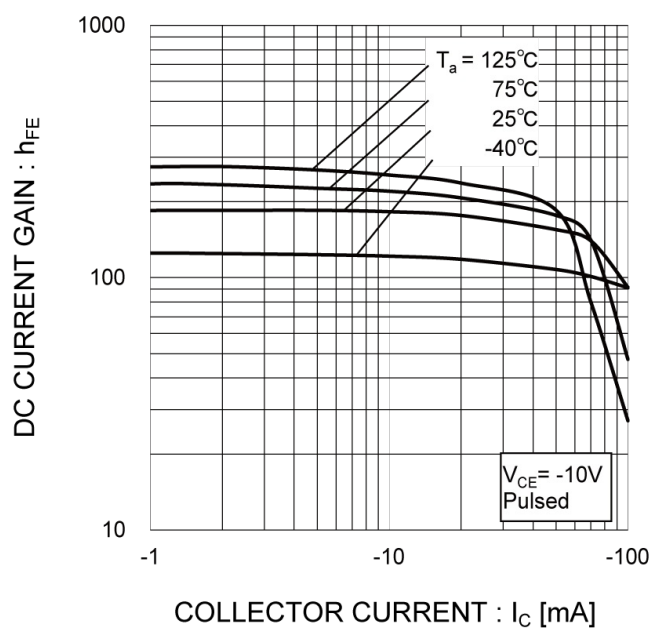
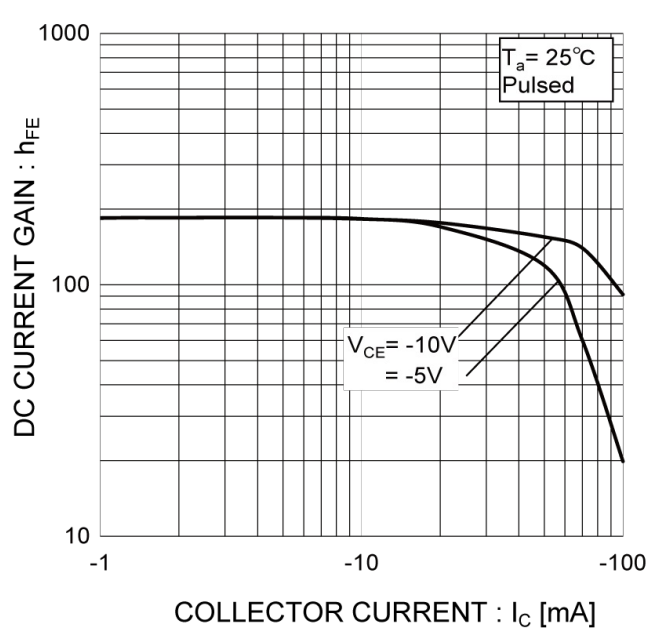


Fig.4 DC Current Gain vs. Collector Current(II)



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

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

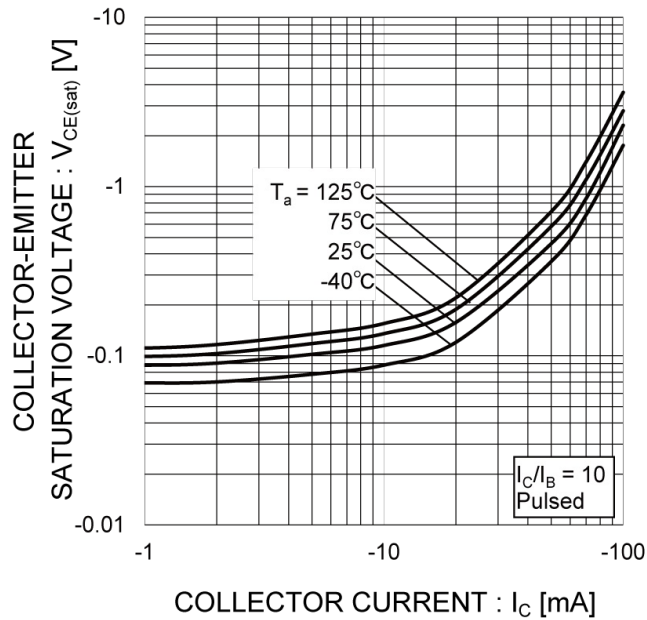


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current(II)

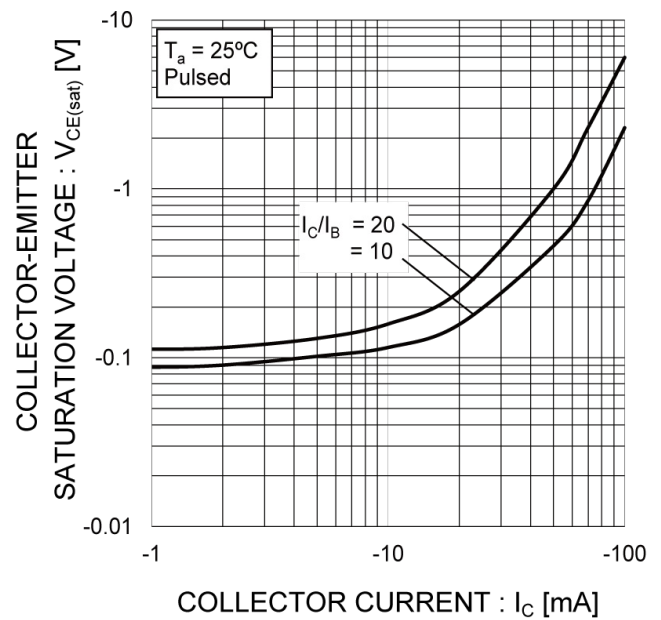


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

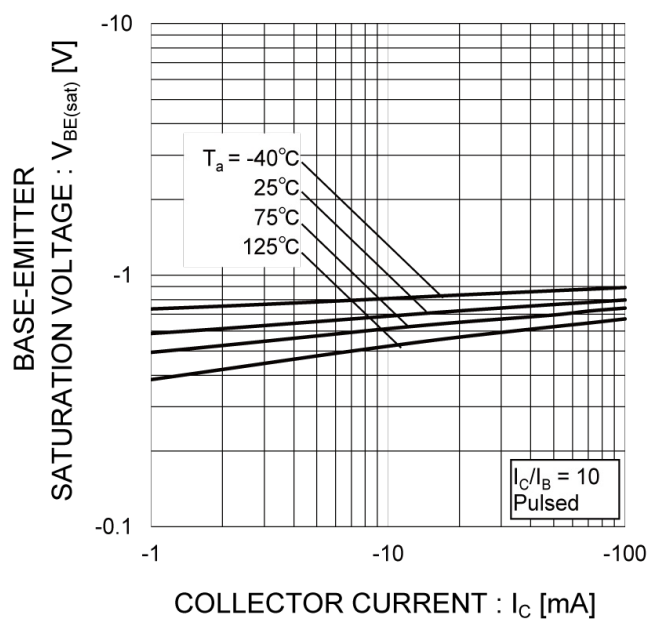
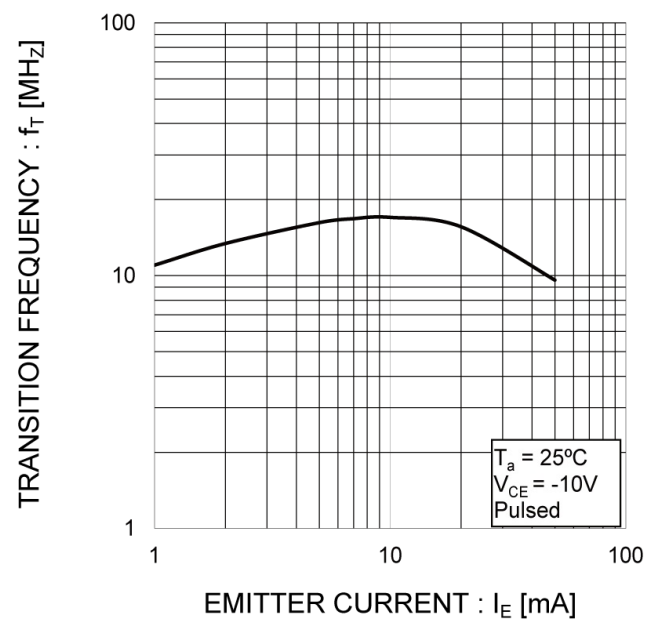


Fig.8 Gain Bandwidth Product vs. Emitter Current



●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

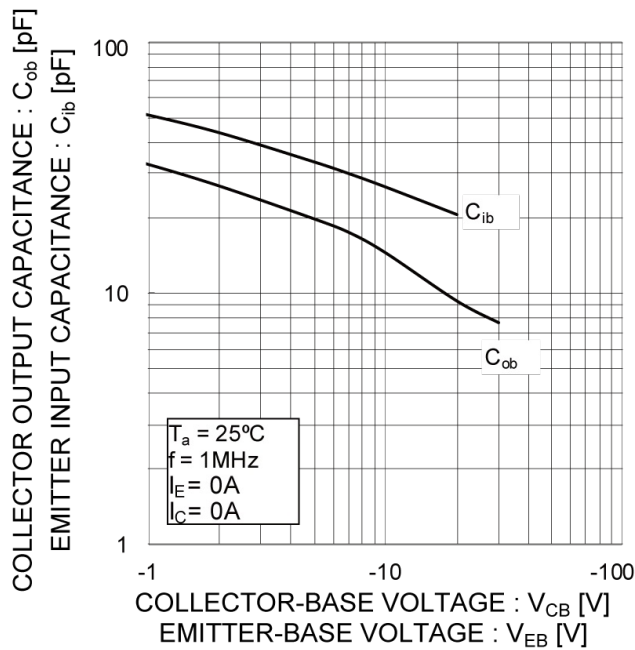
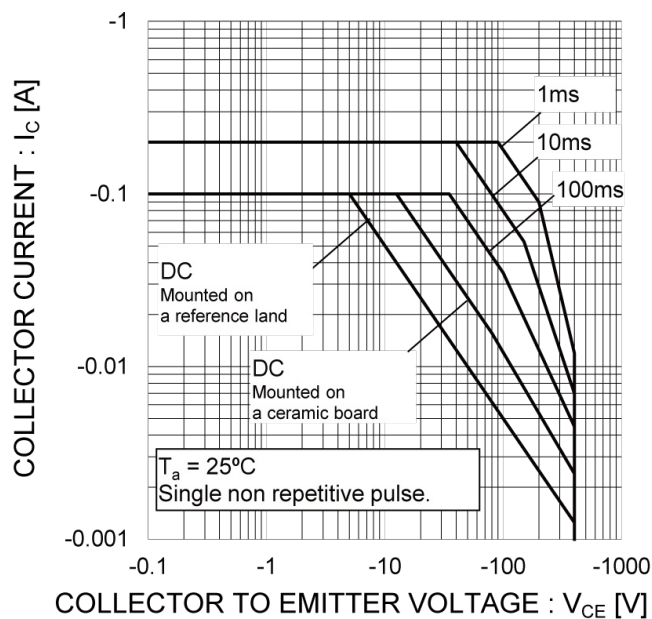
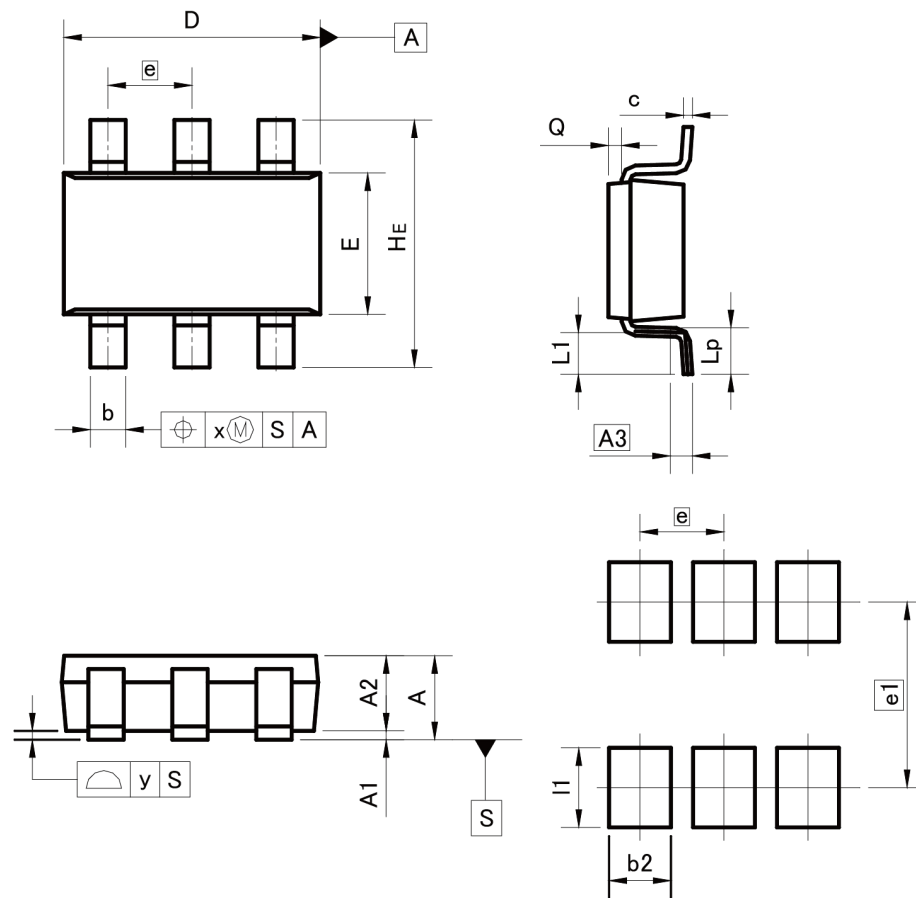


Fig.10 Safe Operating Area



●Dimensions

TSMT6



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

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	—	1.00	—	0.039
A1	0.00	0.10	0.000	0.004
A2	0.75	0.95	0.030	0.037
A3	0.25		0.010	
b	0.35	0.50	0.014	0.020
c	0.10	0.26	0.004	0.010
D	2.80	3.00	0.110	0.118
E	1.50	1.80	0.059	0.071
e	0.95		0.037	
HE	2.60	3.00	0.102	0.118
L1	0.30	0.60	0.012	0.024
Lp	0.40	0.70	0.016	0.028
Q	0.05	0.25	0.002	0.010
x	—	0.20	—	0.008
y	—	0.10	—	0.004

DIM	MILIMETERS		INCHES	
	MIN	MAX	MIN	MAX
b2	—	0.70	—	0.028
e1	2.10		0.083	
l1	—	0.90	—	0.035

Dimension in mm/inches

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