

2SC2619

Silicon NPN Epitaxial

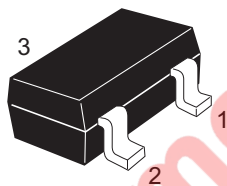
REJ03G0703-0200
(Previous ADE-208-1070)
Rev.2.00
Aug.10.2005

Application

High frequency amplifier

Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)



1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	30	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics

(Ta = 25°C)

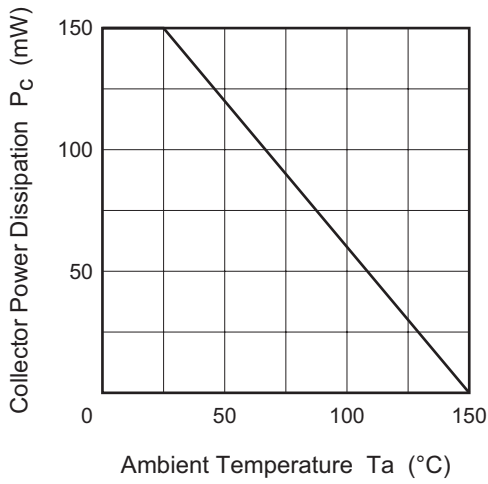
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	30	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.5	μA	$V_{CB} = 20 \text{ V}, I_C = 0$
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	$V_{EB} = 2 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	60	—	200		$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.1	V	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$
Base to emitter voltage	V_{BE}	—	—	0.75	V	$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Gain bandwidth product	f_T	—	230	—	MHz	$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Collector output capacitance	C_{ob}	—	—	3.5	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$
Noise figure	NF	—	5.0	—	dB	$V_{CE} = 6 \text{ V}, I_C = 2 \text{ mA}, f = 1 \text{ MHz}, R_g = 500 \Omega$

Note: 1. The 2SC2619 is grouped by h_{FE} as follows.

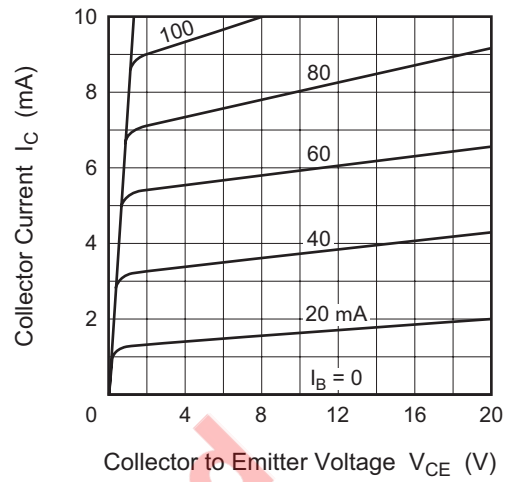
Grade	B	C
Mark	FB	FC
h_{FE}	60 to 120	100 to 200

Not recommend
for new design

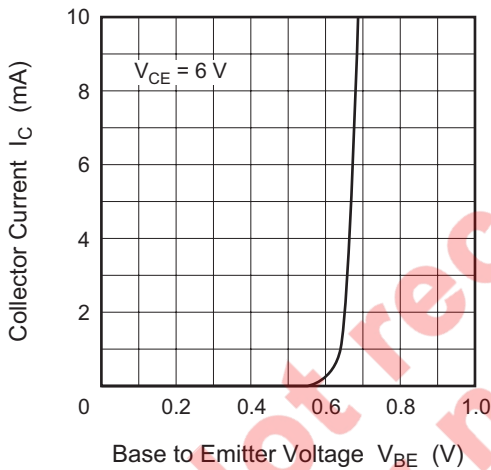
Maximum Collector Dissipation Curve



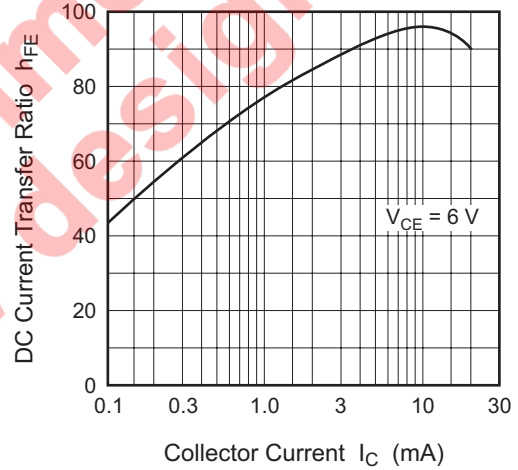
Typical Output Characteristics



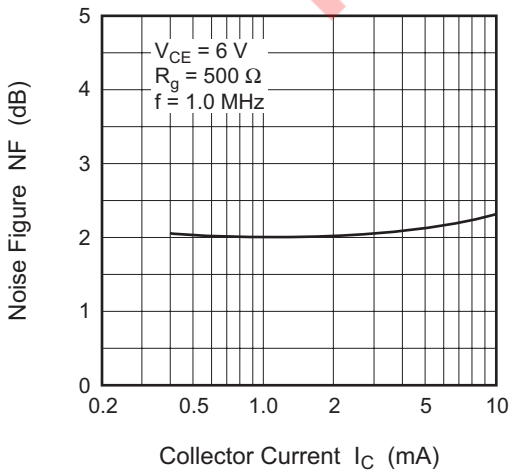
Typical Transfer Characteristics



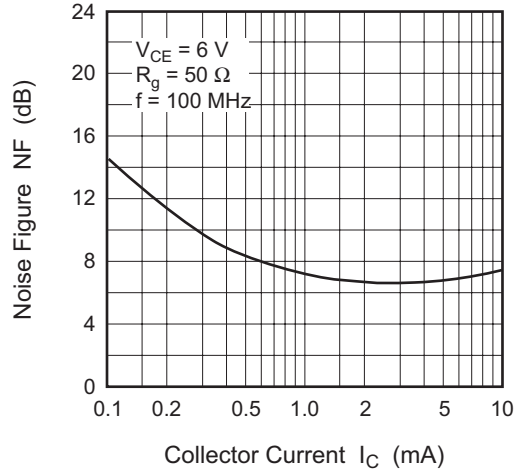
DC Current Transfer Ratio vs. Collector Current



Noise Figure vs. Collector Current

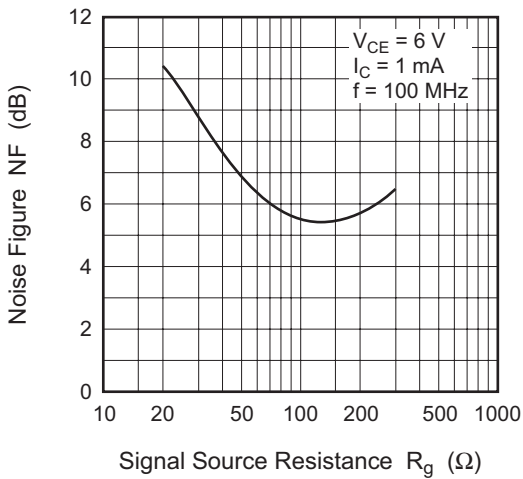


Noise Figure vs. Signal Source Resistance

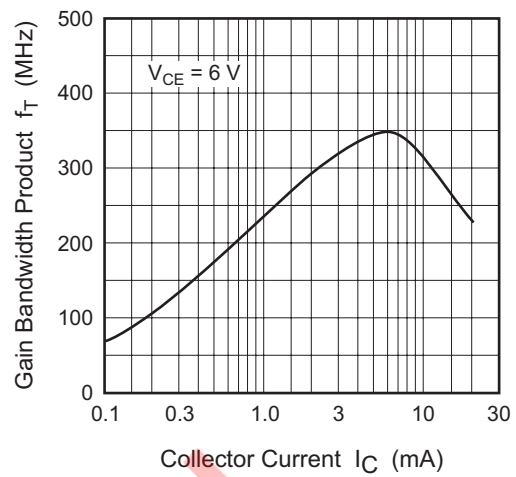


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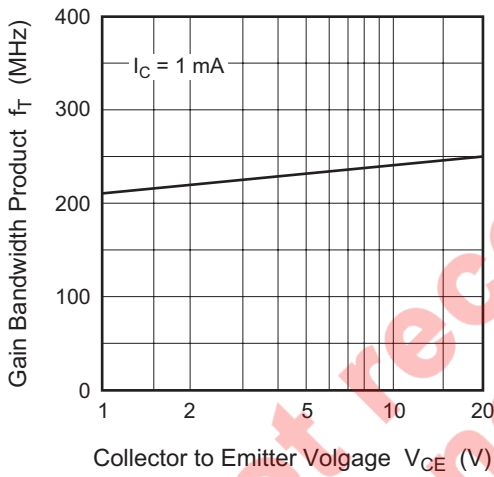
Noise Figure vs. Signal Source Resistance



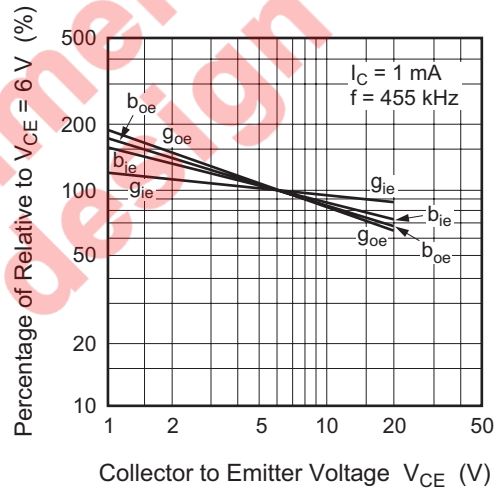
Gain Bandwidth Product vs. Collector Current



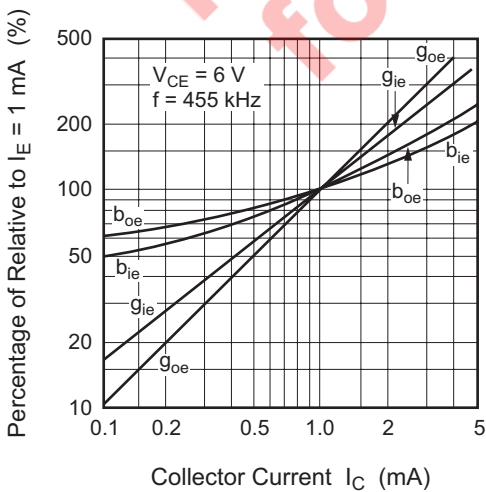
Gain Bandwidth Product vs. Collector to Emitter Voltage



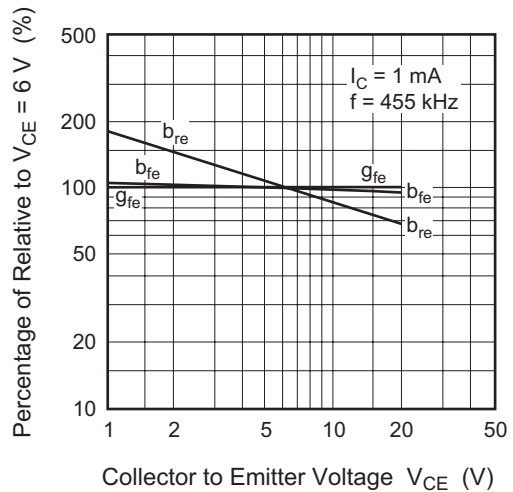
Input/Output Admittance vs. Collector to Emitter Voltage



Input/Output Admittance vs. Collector Current

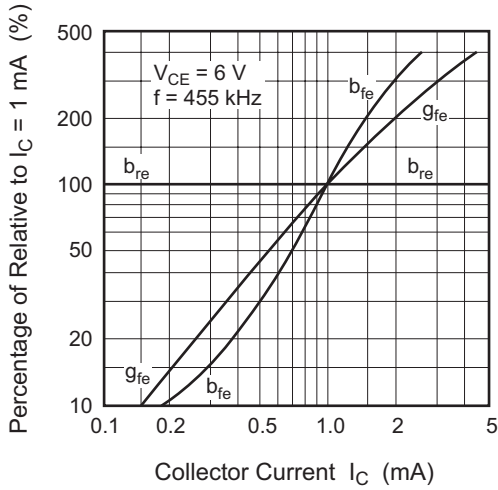


Transfer Admittance vs. Collector to Emitter Voltage

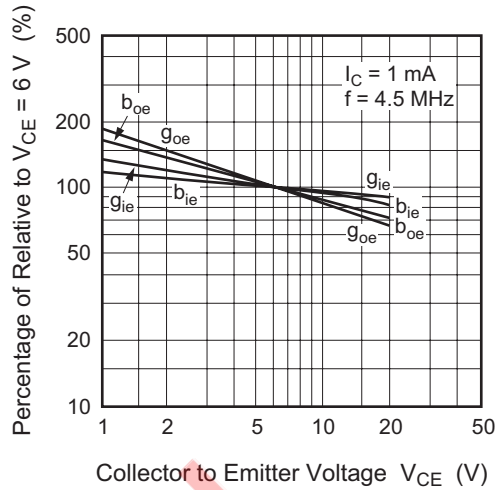


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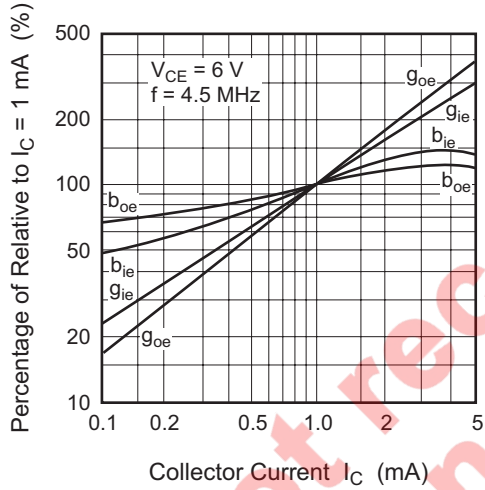
Transfer Admittance vs. Collector Current



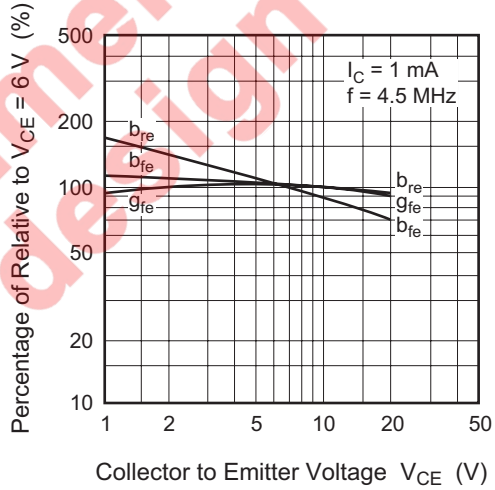
Input/Output Admittance vs. Collector to Emitter Voltage



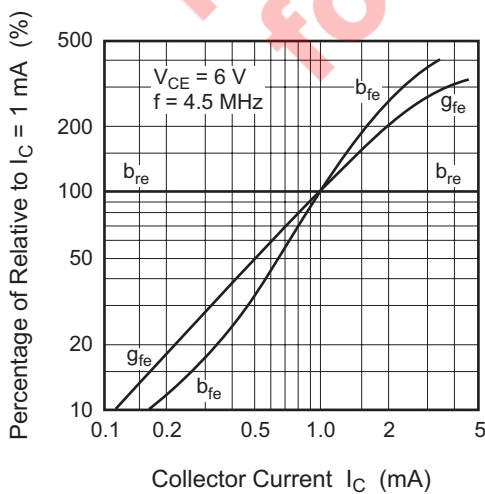
Input/Output Admittance vs. Collector Current



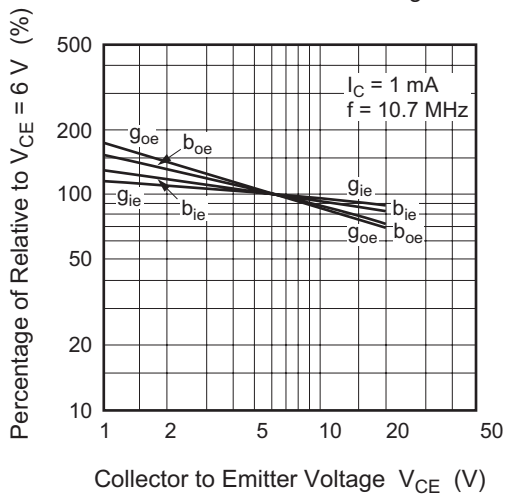
Transfer Admittance vs. Collector to Emitter Voltage



Transfer Admittance vs. Collector Current

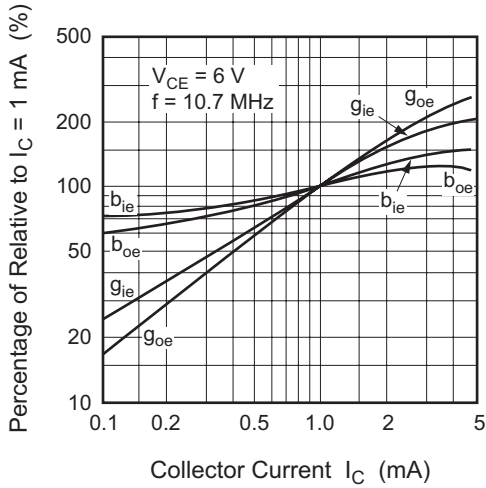


Input/Output Admittance vs. Collector to Emitter Voltage

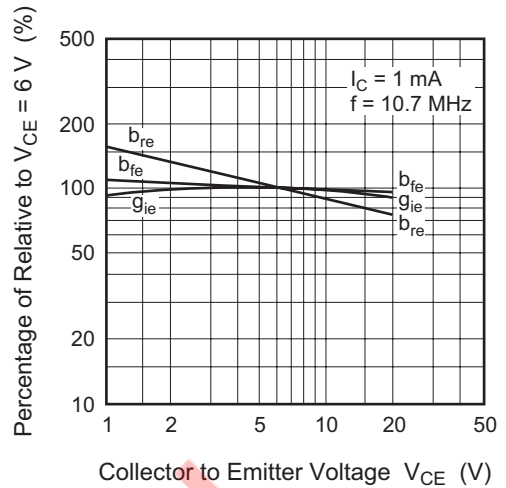


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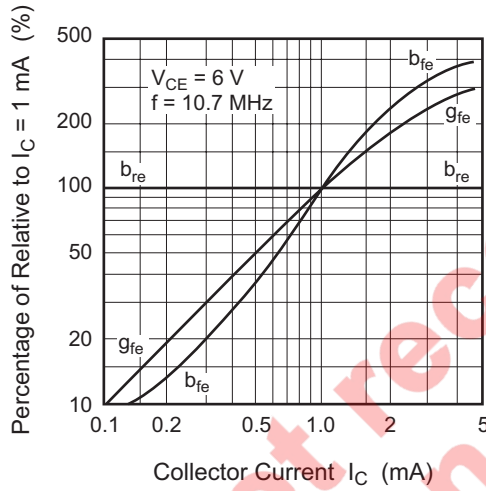
Input/Output Admittance vs. Collector Current



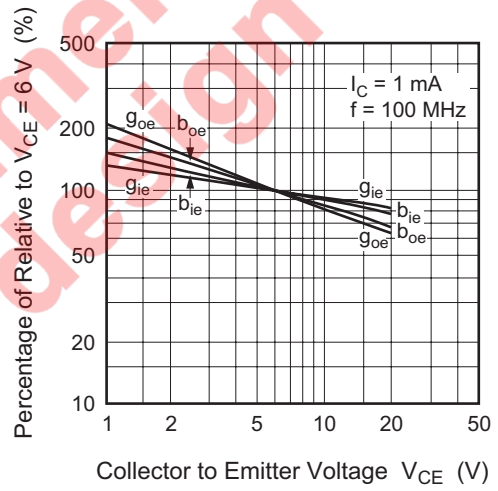
Transfer Admittance vs. Collector to Emitter Voltage



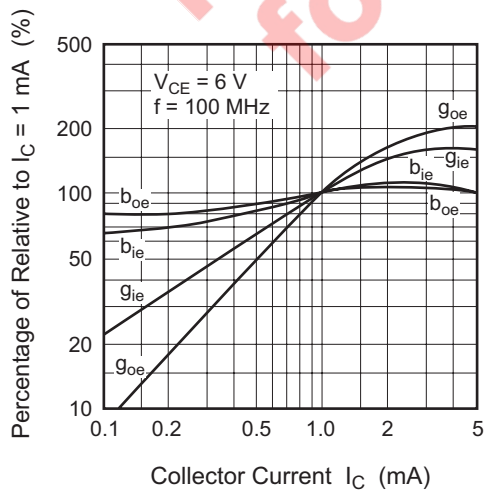
Transfer Admittance vs. Collector Current



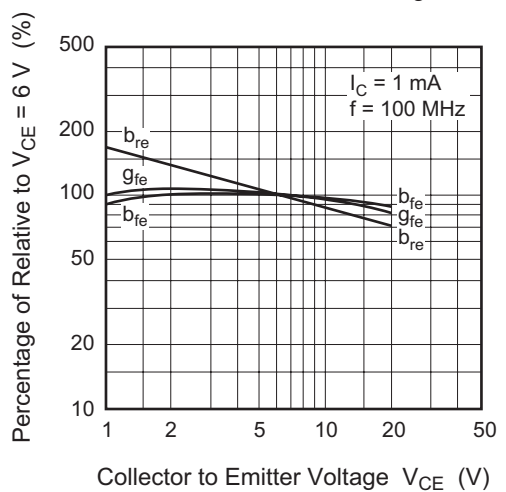
Input/Output Admittance vs. Collector to Emitter Voltage

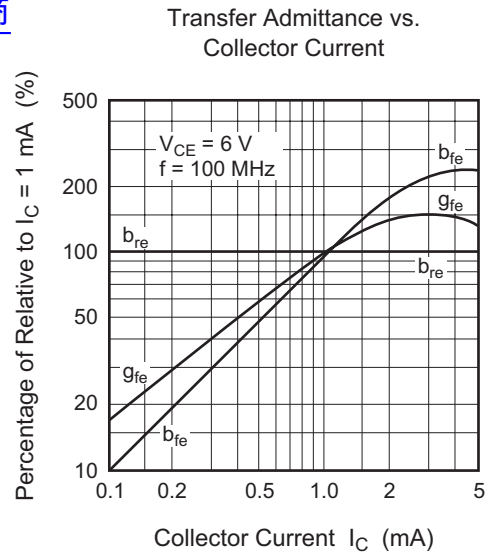


Input/Output Admittance vs. Collector Current



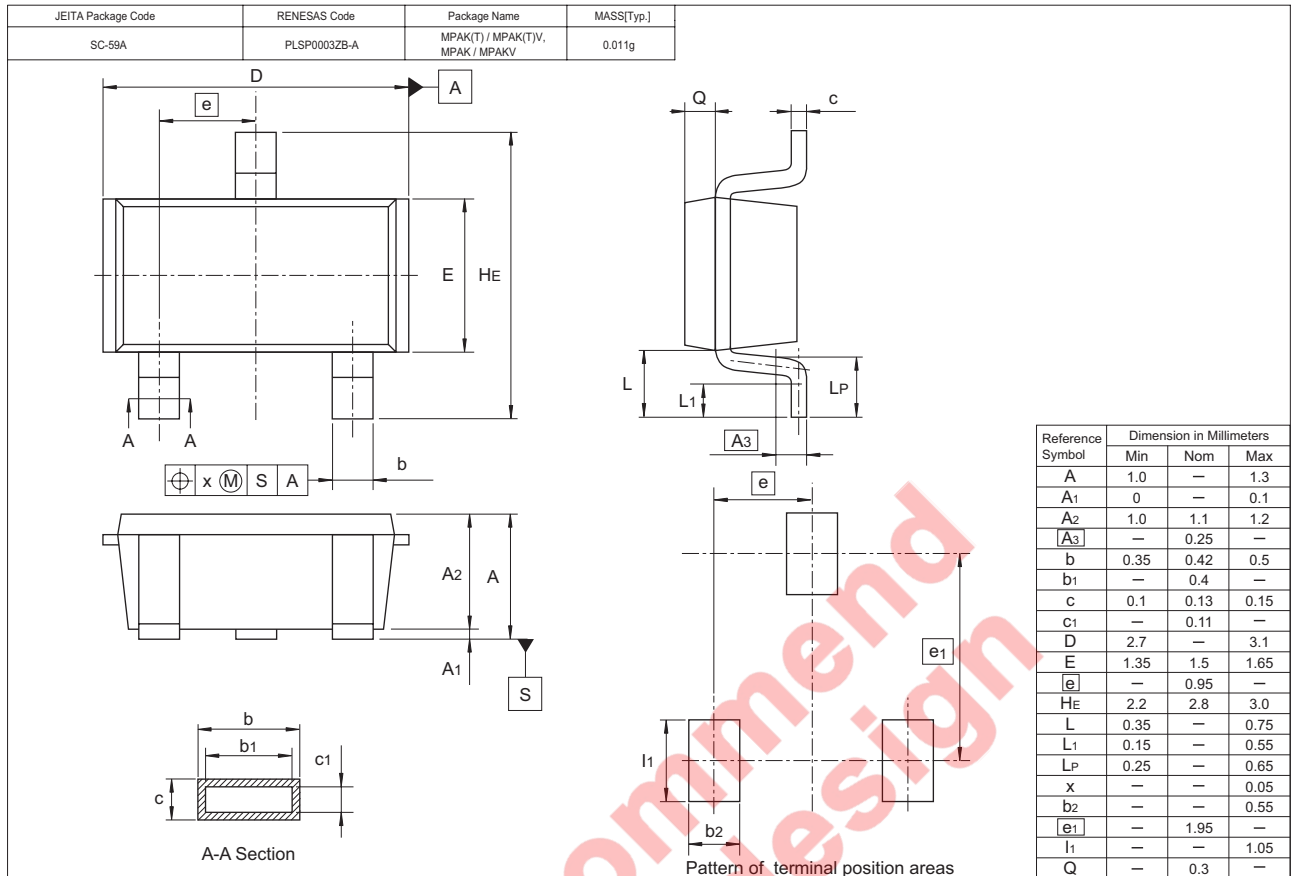
Transfer Admittance vs. Collector to Emitter Voltage



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Not recommend
for new design

Package Dimensions 封装尺寸



Ordering Information

Part Name	Quantity	Shipping Container
2SC2619FBTR-E	3000	φ 178 mm Reel, 8 mm Emboss Taping
2SC2619FCTR-E		

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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