

2SC2619

Silicon NPN Epitaxial

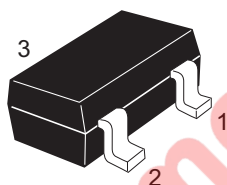
REJ03G0703-0200
(Previous ADE-208-1070)
Rev.2.00
Aug.10.2005

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

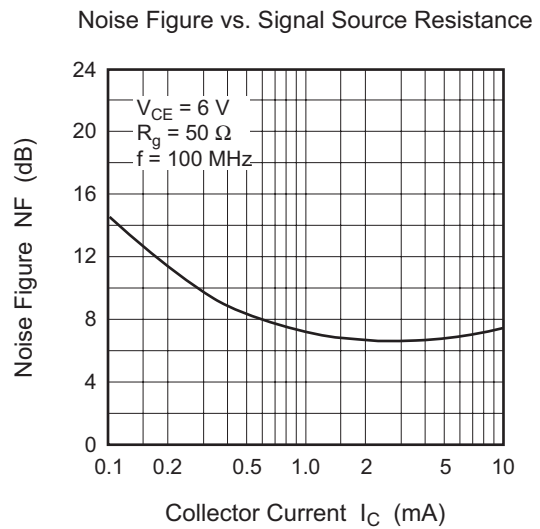
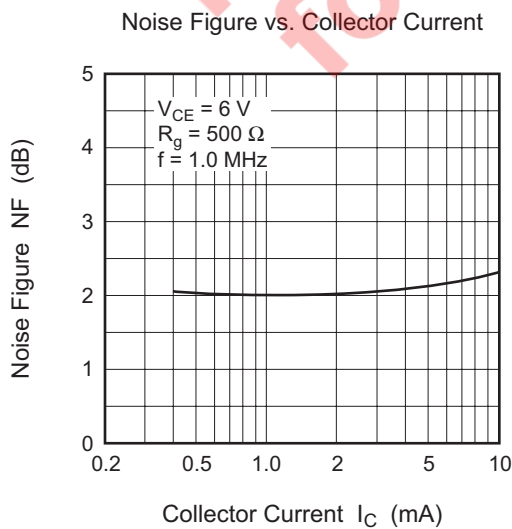
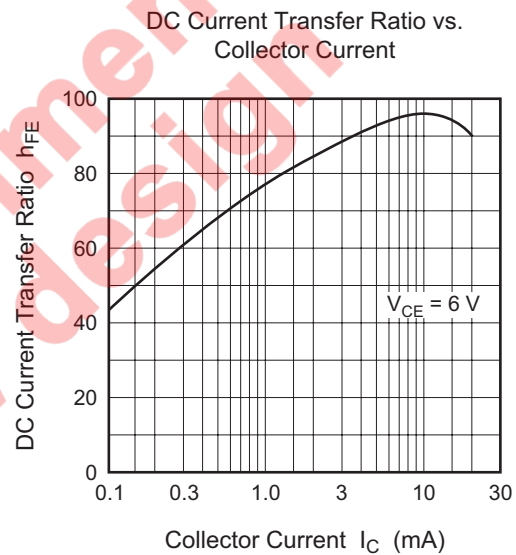
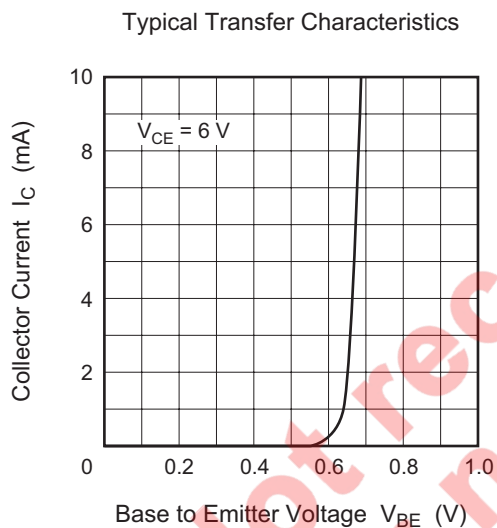
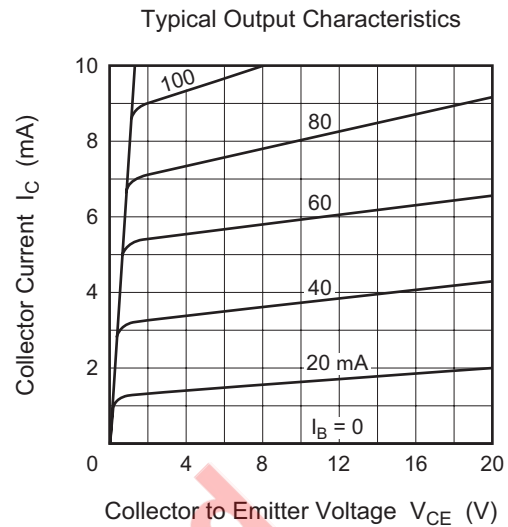
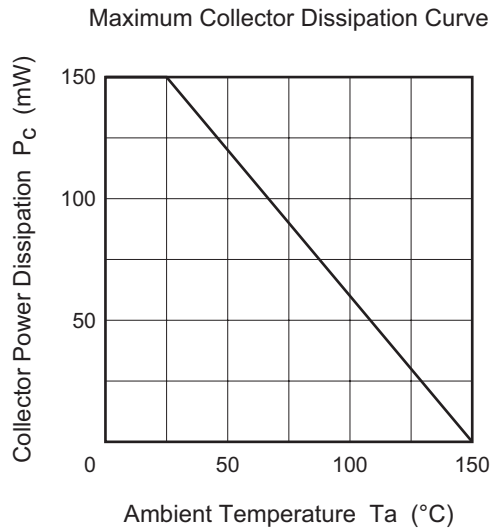
(Ta = 25°C)

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

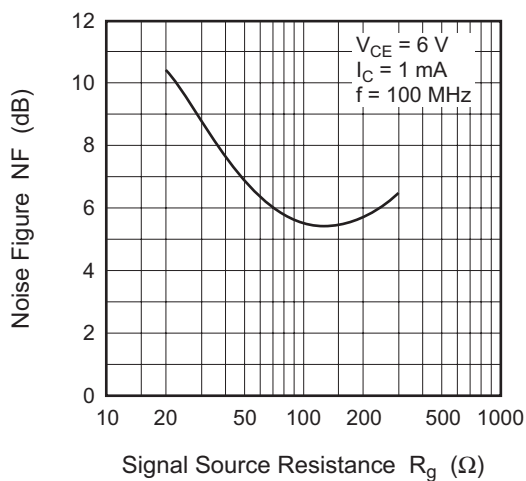
Note: 1. The 2SC2619 is grouped by h_{FE} as follows.

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

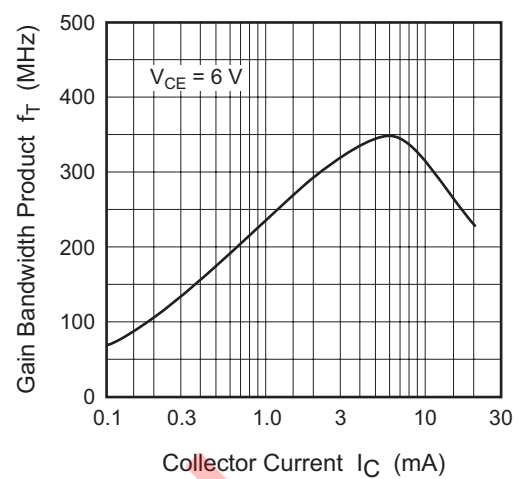
Main Characteristics



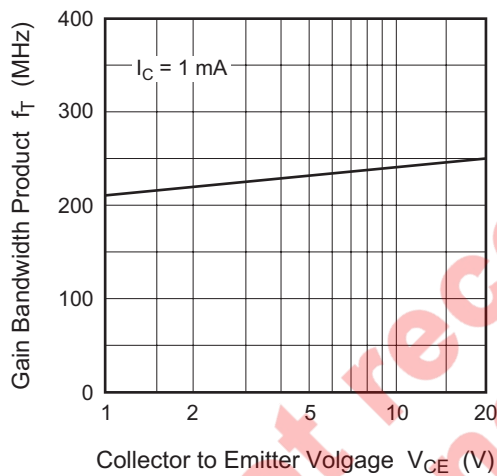
Noise Figure vs. Signal Source Resistance



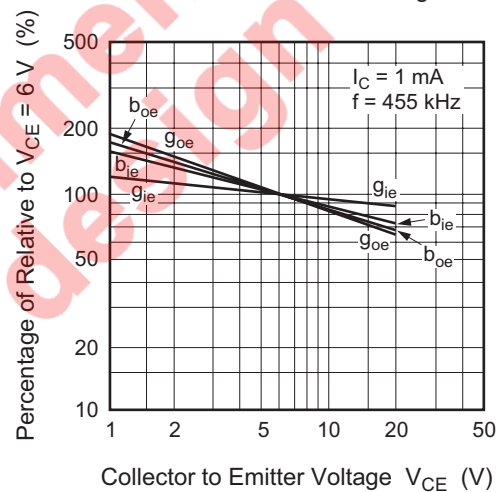
Gain Bandwidth Product vs. Collector Current



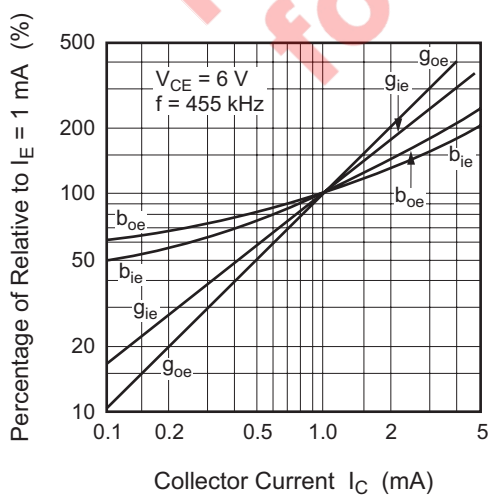
Gain Bandwidth Product vs. Collector to Emitter Voltage



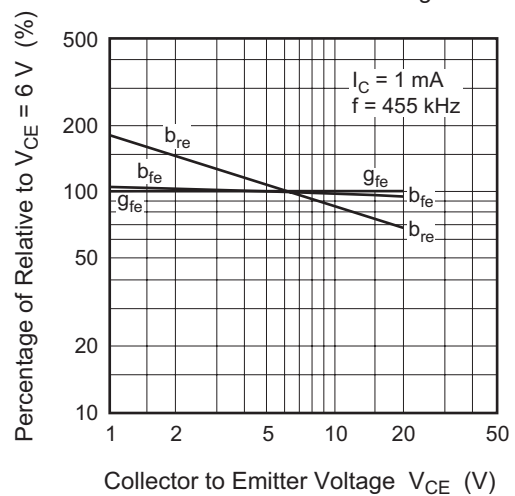
Input/Output Admittance vs. Collector to Emitter Voltage

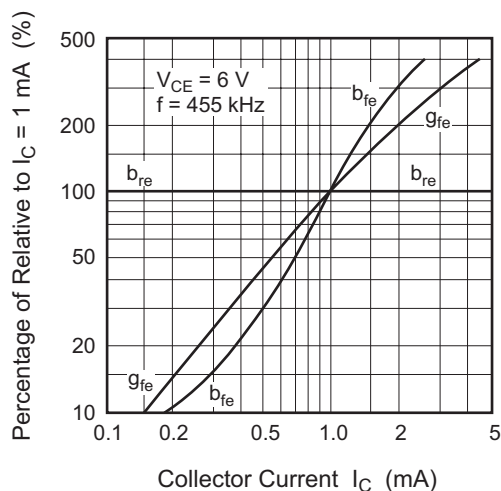
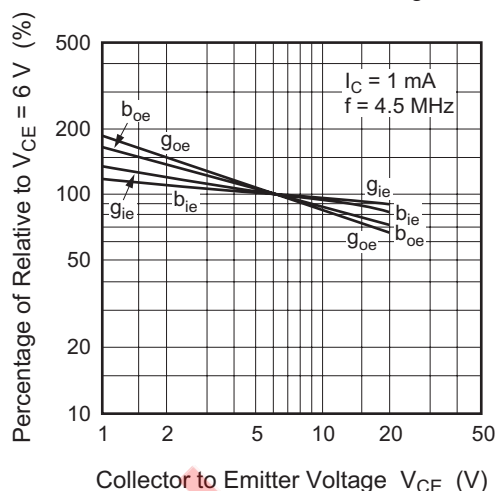
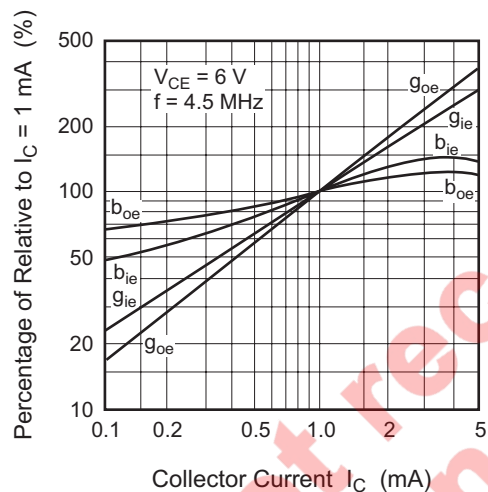
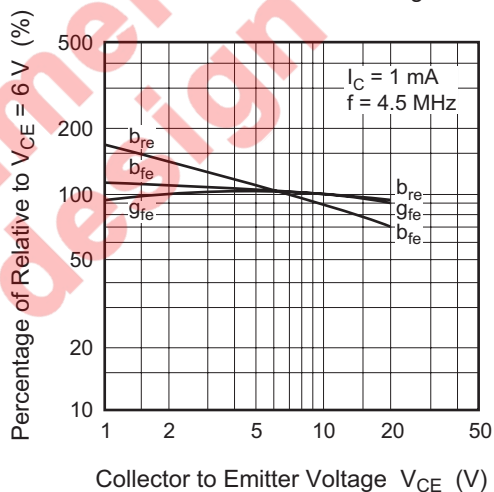
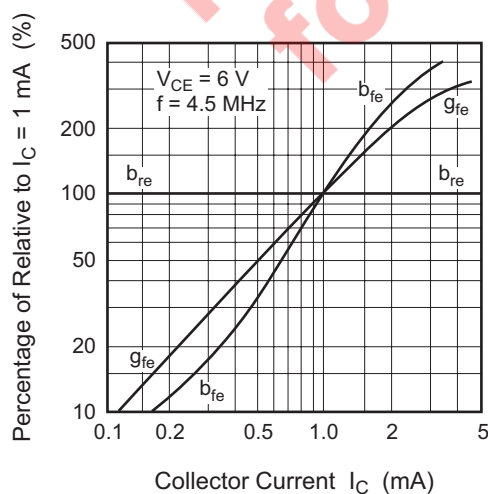
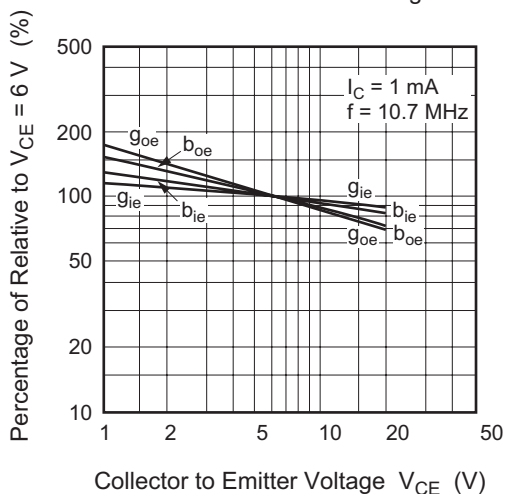


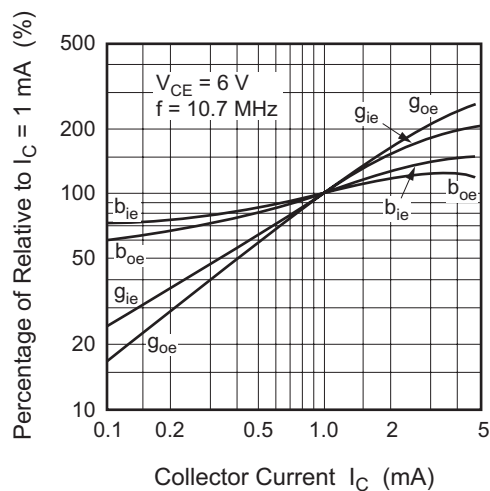
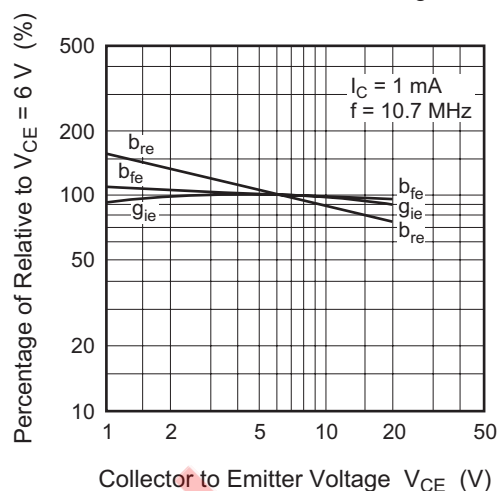
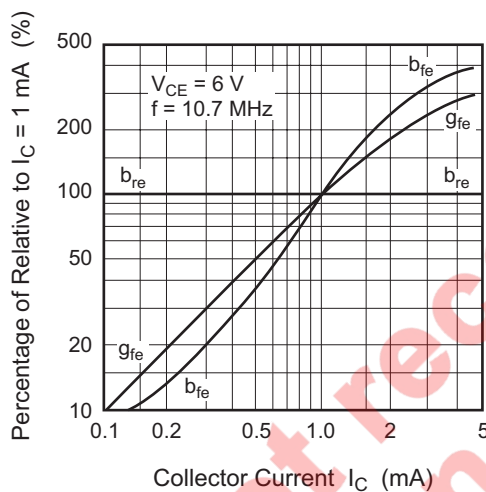
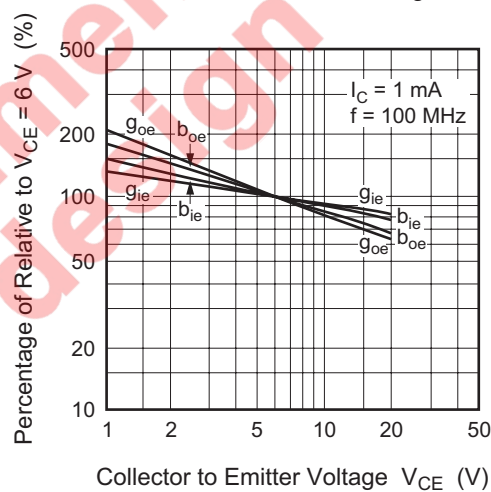
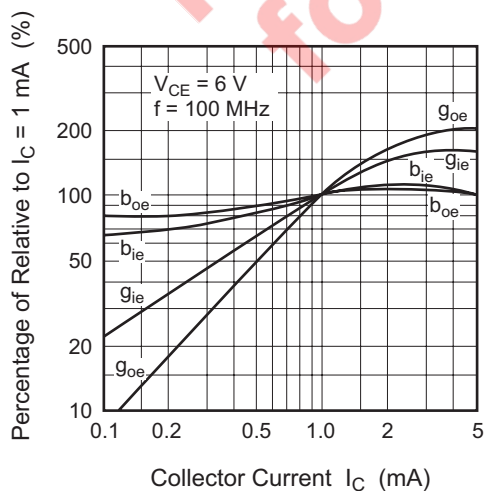
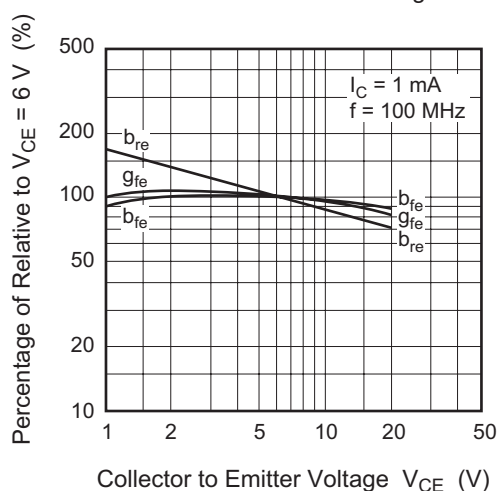
Input/Output Admittance vs. Collector Current

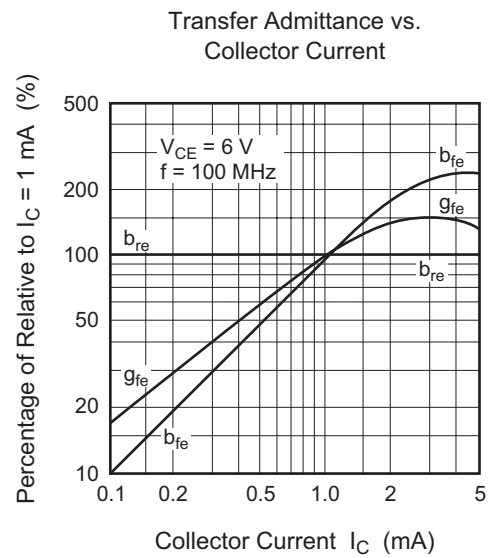


Transfer Admittance vs. Collector to Emitter Voltage



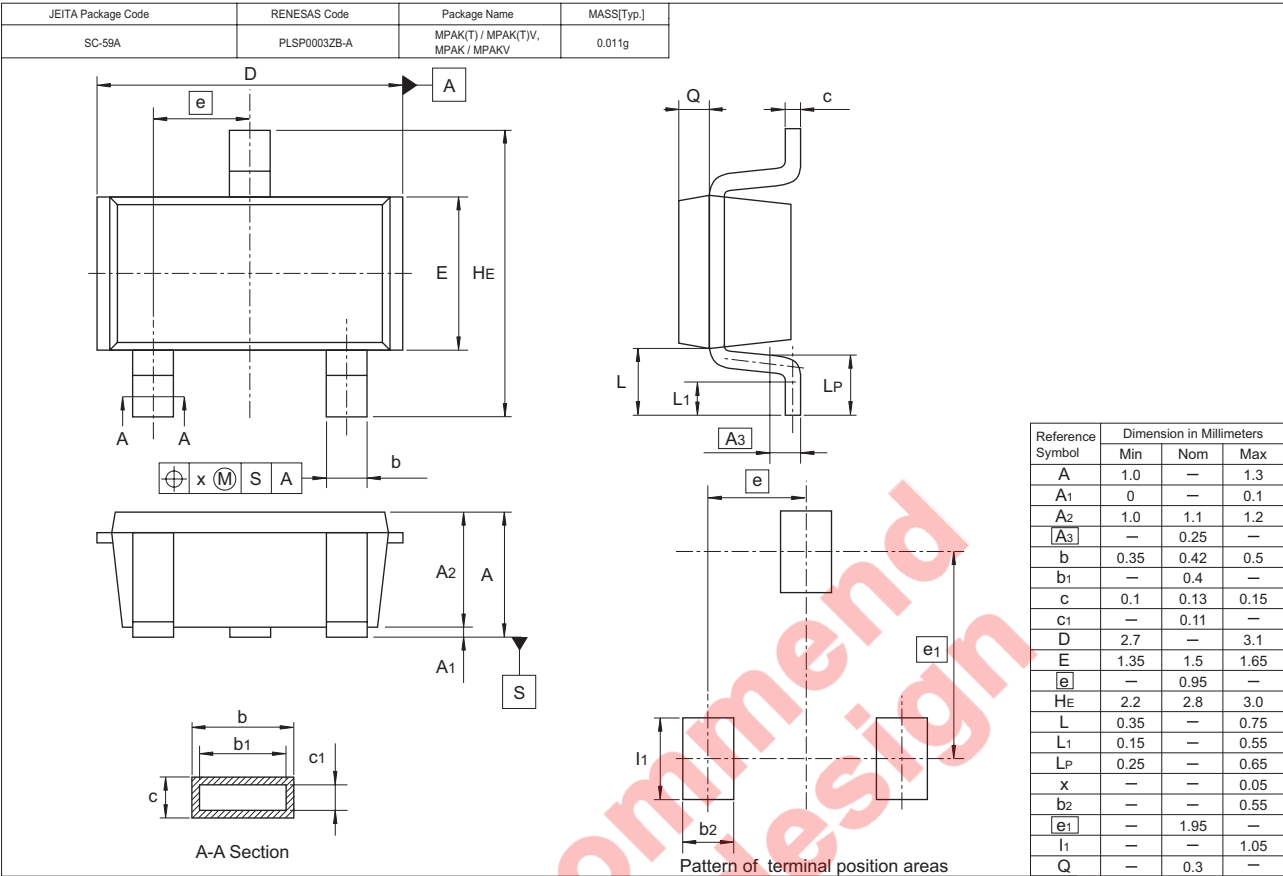
Transfer Admittance vs.
Collector CurrentInput/Output Admittance vs.
Collector to Emitter VoltageInput/Output Admittance vs.
Collector CurrentTransfer Admittance vs.
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Collector CurrentInput/Output Admittance vs.
Collector to Emitter VoltageInput/Output Admittance vs.
Collector CurrentTransfer Admittance vs.
Collector to Emitter Voltage



Not recommended
for new design

Package Dimensions



Ordering Information

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

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