
2SD655

Silicon NPN Epitaxial

HITACHI

Application

Low frequency power amplifier, Muting

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SD655

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	0.7	A
Collector peak current	$i_{C(\text{peak})}$	1.0	A
Collector power dissipation	P_C	500	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

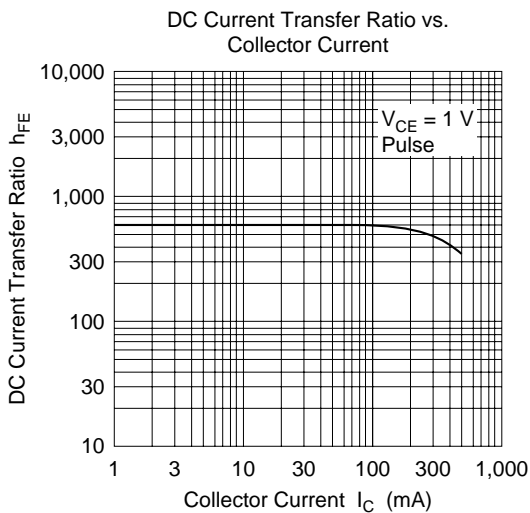
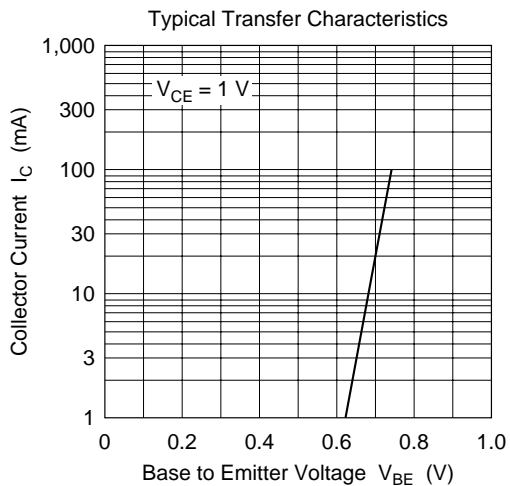
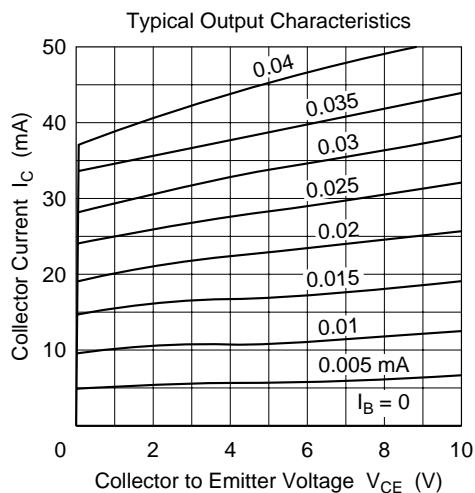
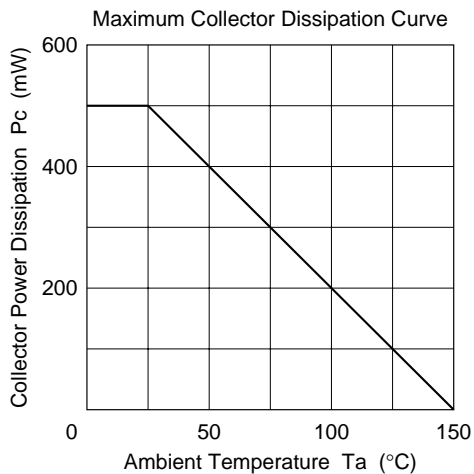
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 10 \mu\text{A}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	15	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu\text{A}, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 20 \text{ V}, I_E = 0$
Base to emitter voltage	V_{BE}	—	—	1.0	V	$V_{CE} = 1 \text{ V}, I_C = 150 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(\text{sat})}$	—	0.15	0.5	V	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}^{*2}$
DC current transfer ratio	h_{FE}^{*1}	250	—	1200		$V_{CE} = 1 \text{ V}, I_C = 150 \text{ mA}^{*2}$
Gain bandwidth product	f_T	—	250	—	MHz	$V_{CE} = 1 \text{ V}, I_C = 150 \text{ mA}$

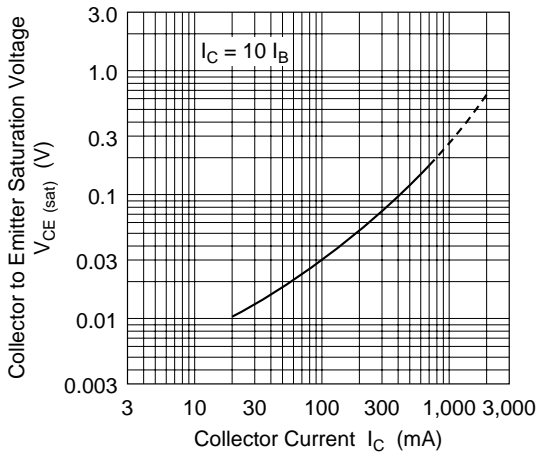
Notes: 1. The 2SD655 is grouped by h_{FE} as follows.

2. Pulse test

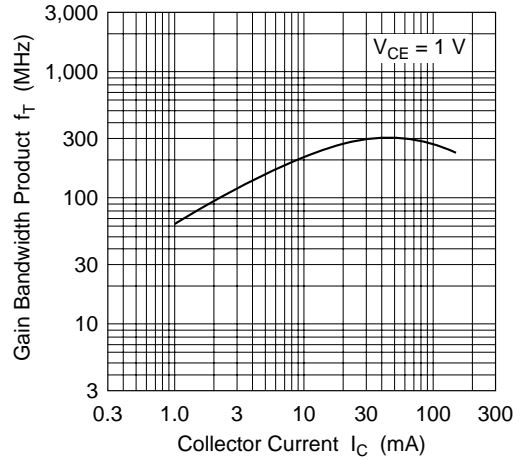
D	E	F
250 to 500	400 to 800	600 to 1200



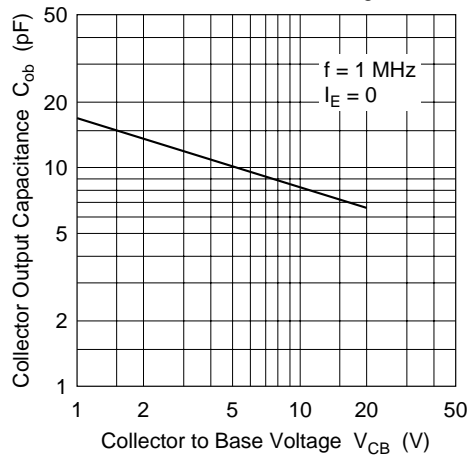
Collector to Emitter Saturation Voltage vs. Collector Current

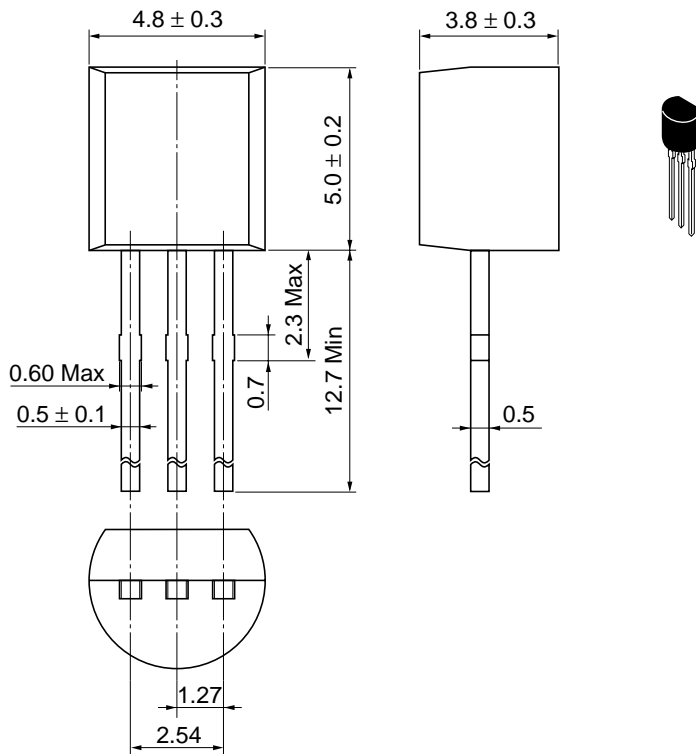


Gain Bandwidth Product vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage





Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g

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