
2SC2855, 2SC2856

Silicon NPN Epitaxial

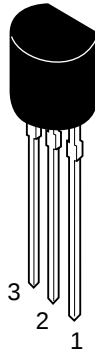
HITACHI

Application

- Low frequency low noise amplifier
- Complementary pair with 2SA1190 and 2SA1191

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SC2855, 2SC2856

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SC2855	2SC2856	Unit
Collector to base voltage	V _{CBO}	90	120	V
Collector to emitter voltage	V _{CEO}	90	120	V
Emitter to base voltage	V _{EBO}	5	5	V
Collector current	I _C	100	100	mA
Emitter current	I _E	−100	−100	mA
Collector power dissipation	P _C	400	400	mW
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	−55 to +150	−55 to +150	°C

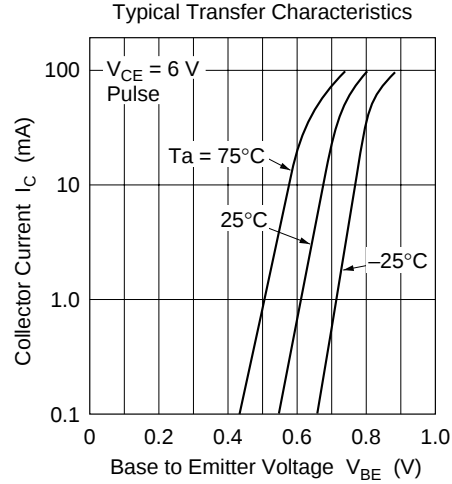
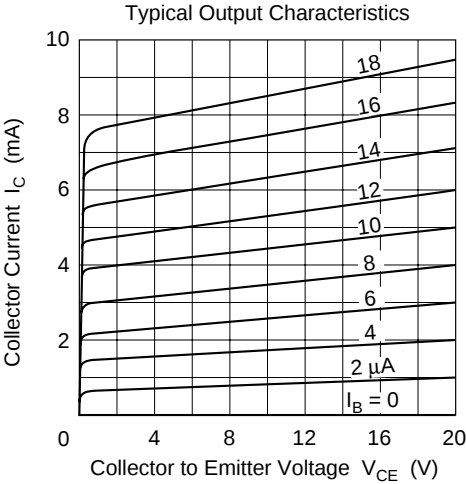
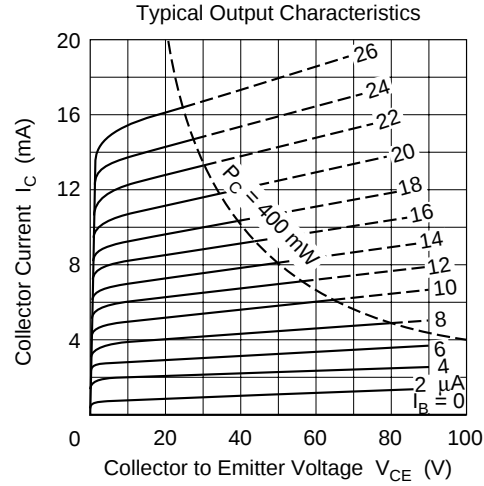
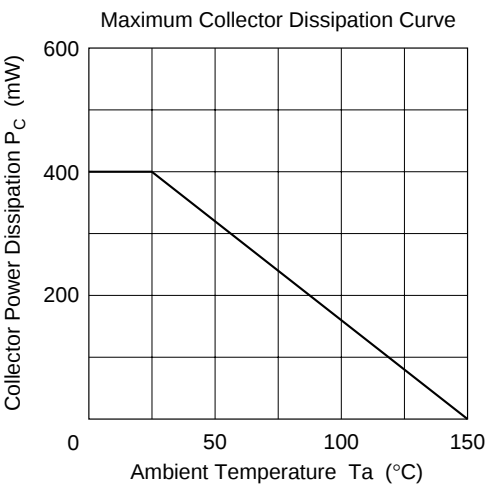
Electrical Characteristics (Ta = 25°C)

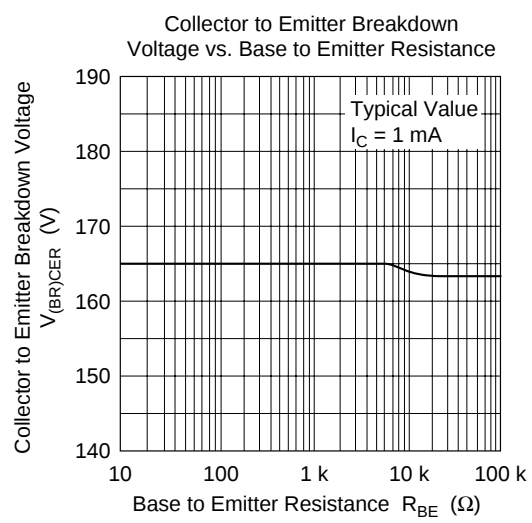
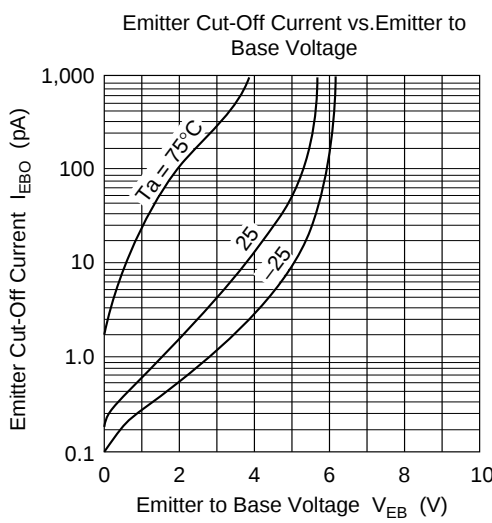
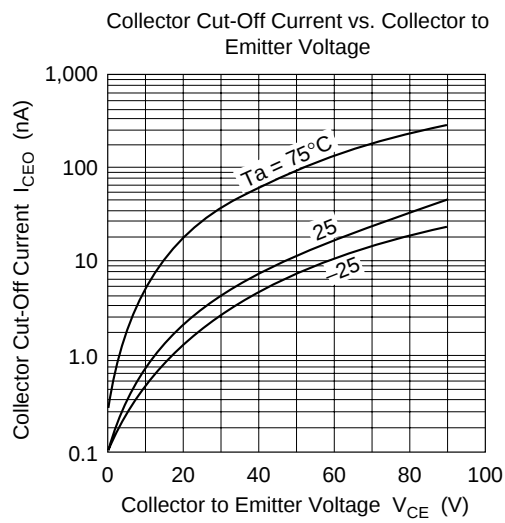
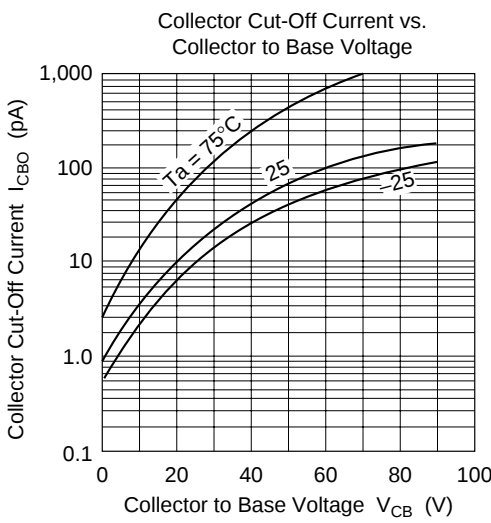
Item	Symbol	2SC2855			2SC2856			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	90	—	—	120	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	90	—	—	120	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.1	—	—	0.1	μA	$V_{CB} = 70 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	0.1	—	—	0.1	μA	$V_{EB} = 2 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	250	—	800	250	—	800		$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.05	0.10	—	0.05	0.10	V	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}^{*2}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	0.7	1.0	—	0.7	1.0	V	
Gain bandwidth product	f_T	—	310	—	—	310	—	MHz	$V_{CE} = 6 \text{ V}, I_C = 10 \text{ mA}$
Collector output capacitance	Cob	—	3	—	—	3	—	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$
Noise figure	NF	—	0.15	1.5	—	0.15	1.5	dB	$V_{CE} = 6 \text{ V}, I_C = 0.1 \text{ mA}, R_g = 10 \text{ k}\Omega, f = 1 \text{ kHz}$
		—	0.2	2.0	—	0.2	2.0	dB	$V_{CE} = 6 \text{ V}, I_C = 0.1 \text{ mA}, R_g = 10 \text{ k}\Omega, f = 10 \text{ Hz}$
Noise voltage referred to input	e_n	—	0.7	—	—	0.7	—	$nV/\sqrt{Hz}$	$V_{CE} = 6 \text{ V}, I_C = 10 \text{ mA}, R_g = 0, f = 1 \text{ kHz}$

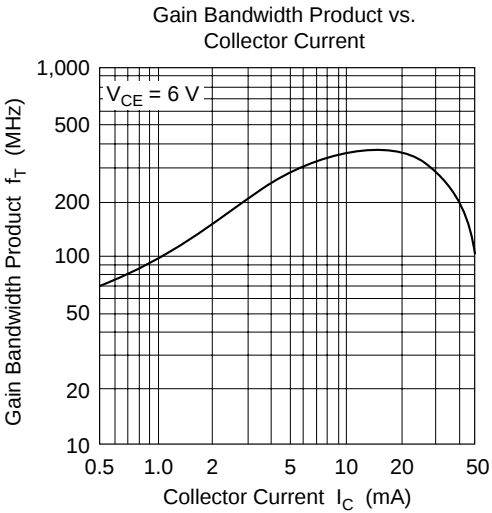
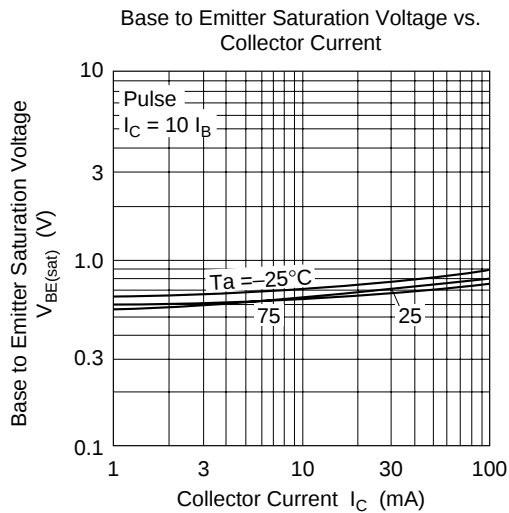
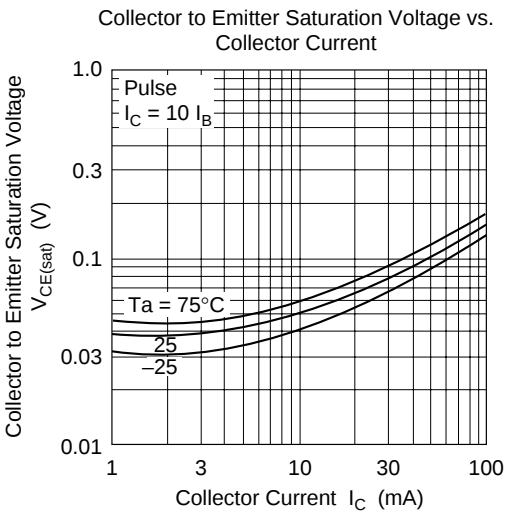
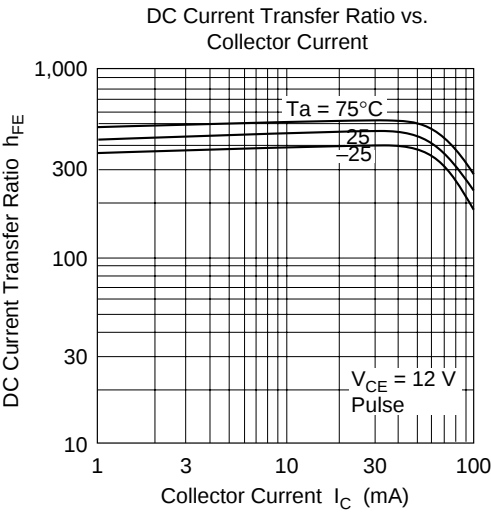
Notes: 1. The 2SC2855 and 2SC2856 are grouped by h_{FE} as follows.

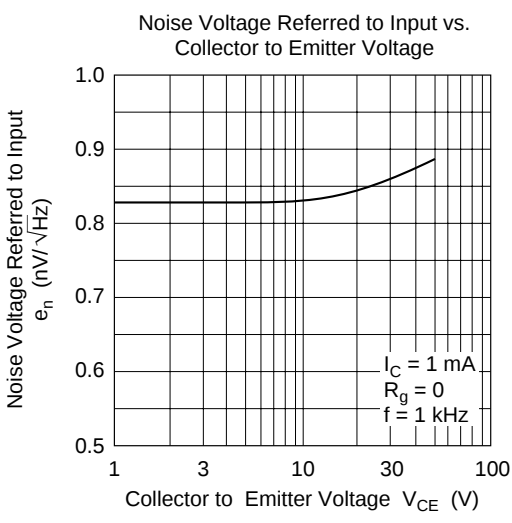
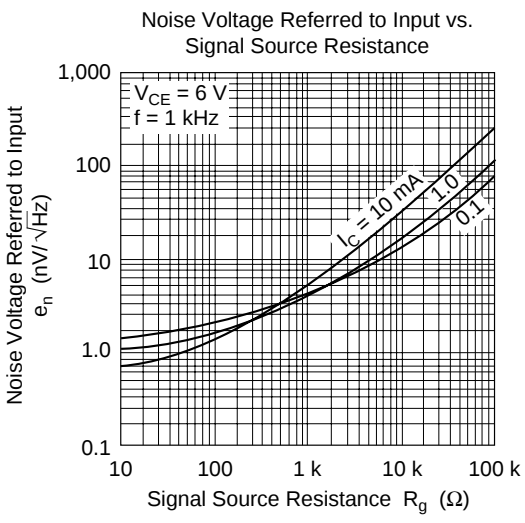
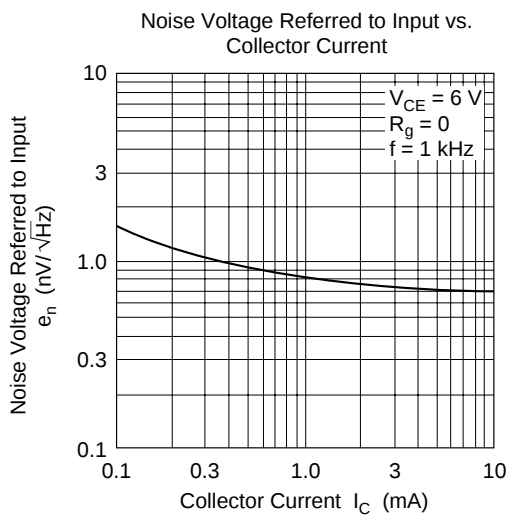
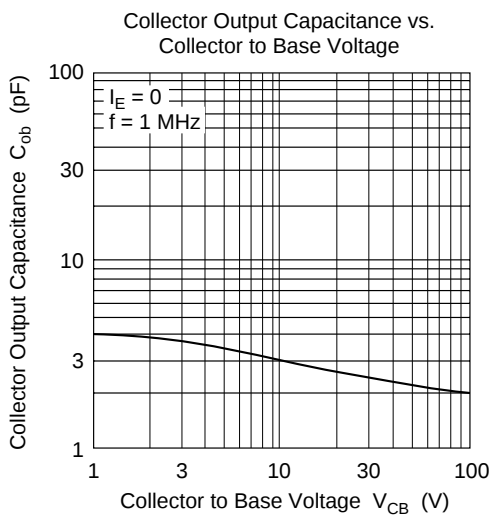
2. Pulse test

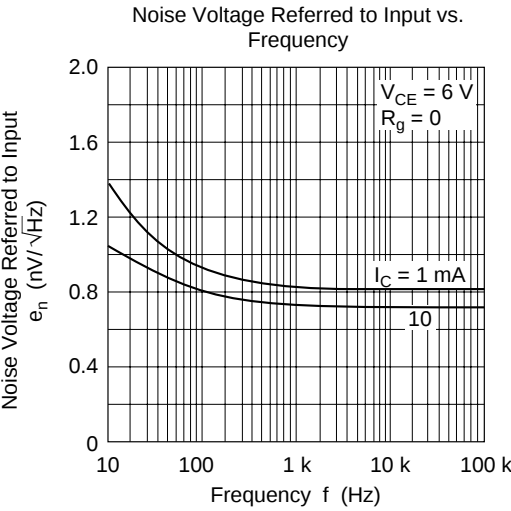
D	E
250 to 500	400 to 800

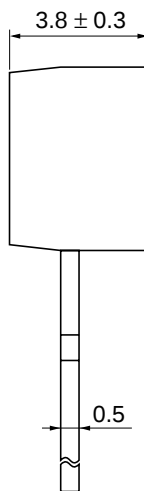
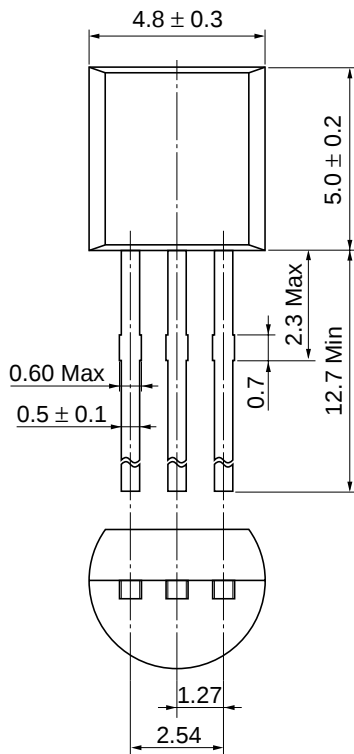












Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g

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