

2SC4046

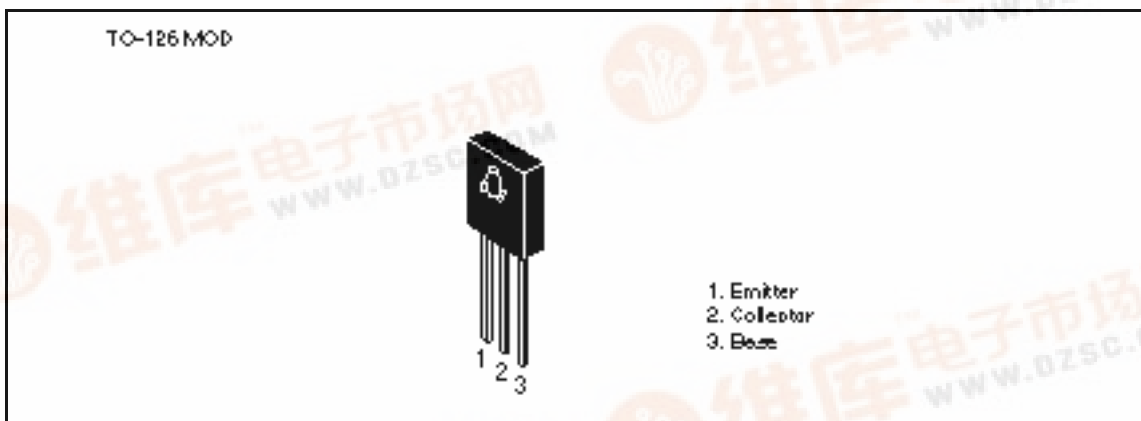
Silicon NPN Epitaxial

HITACHI

Application

High voltage amplifier

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	120	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	0.2	A
Collector power dissipation	P_C^{*1}	8	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Note: 1. Value at $T_c = 25^\circ\text{C}$

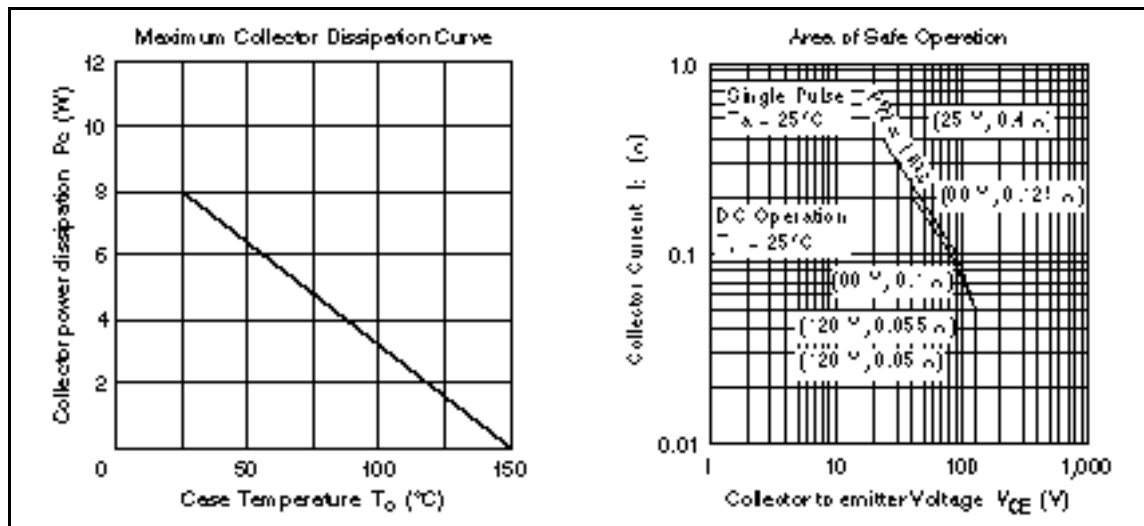
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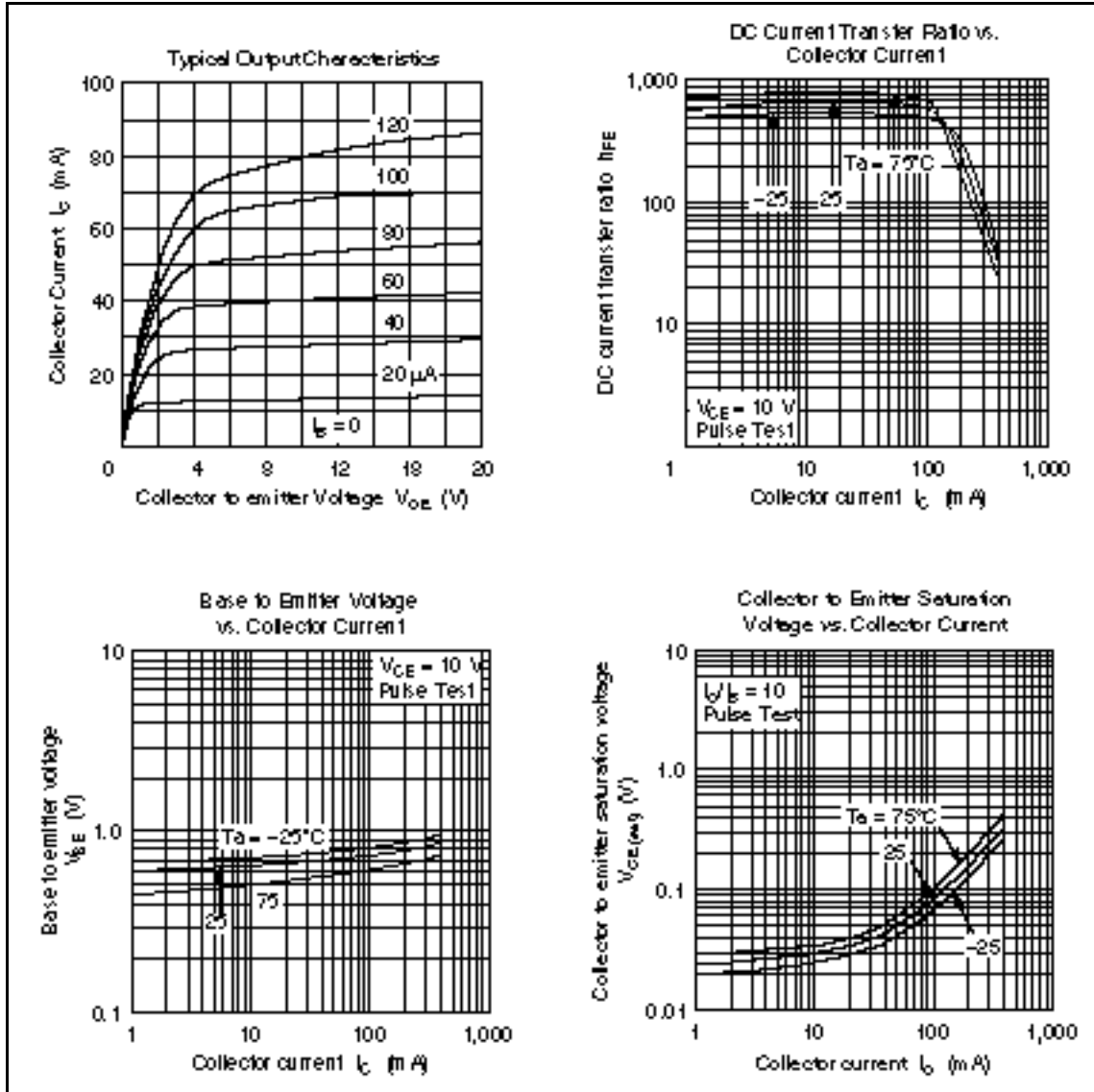
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	120	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	120	—	—	V	$I_C = 1 \text{ mA}, R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	10	μA	$V_{CB} = 80 \text{ V}, I_E = 0$
DC current transfer ratio	h_{FE}^{*1}	250	—	800		$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}$
Base to emitter voltage	V_{BE}	—	—	1.0	V	
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 200 \text{ mA}, I_B = 20 \text{ mA}$
Gain bandwidth product	f_T	—	350	—	MHz	$V_{CE} = 10 \text{ V}, I_C = 50 \text{ mA}$
Collector output capacitance	C_{ob}	—	3.5	—	pF	$V_{CB} = 30 \text{ V}, f = 1 \text{ MHz}, I_E = 0$

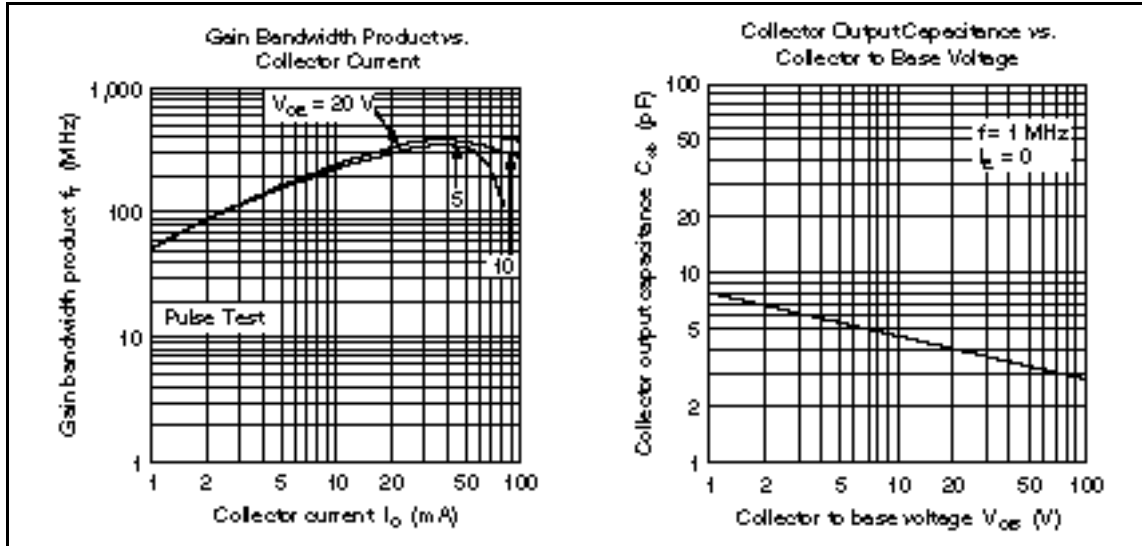
Note: 1. The 2SC4046 is grouped by h_{FE} as follows.

Grade	D	E
h_{FE}	250 to 500	400 to 800





2SC4046



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