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# 2SC4050

Silicon NPN Epitaxial

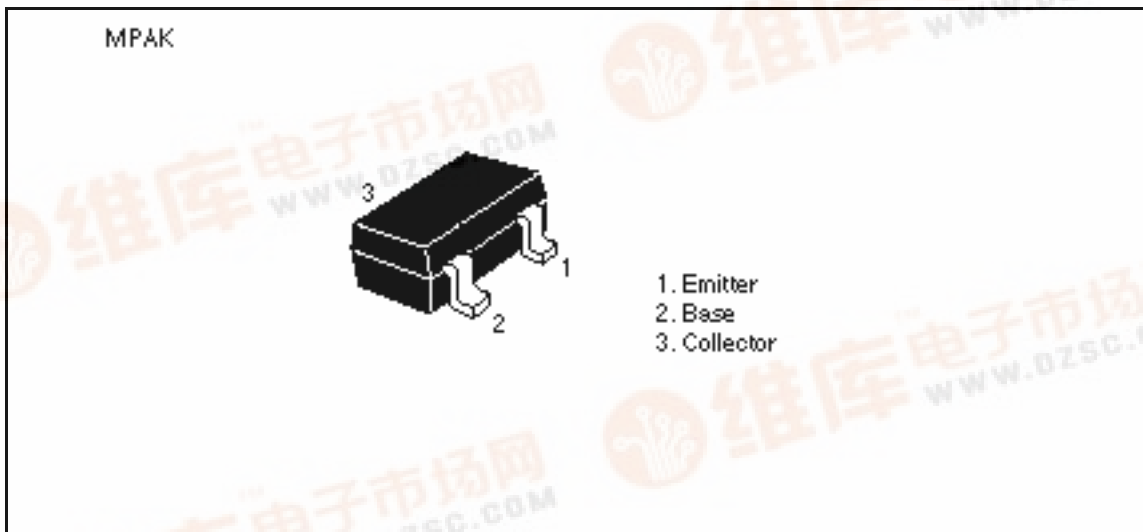
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## Application

Low frequency amplifier, switching

## Outline



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## 2SC4050

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### 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	$I_C$	100	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

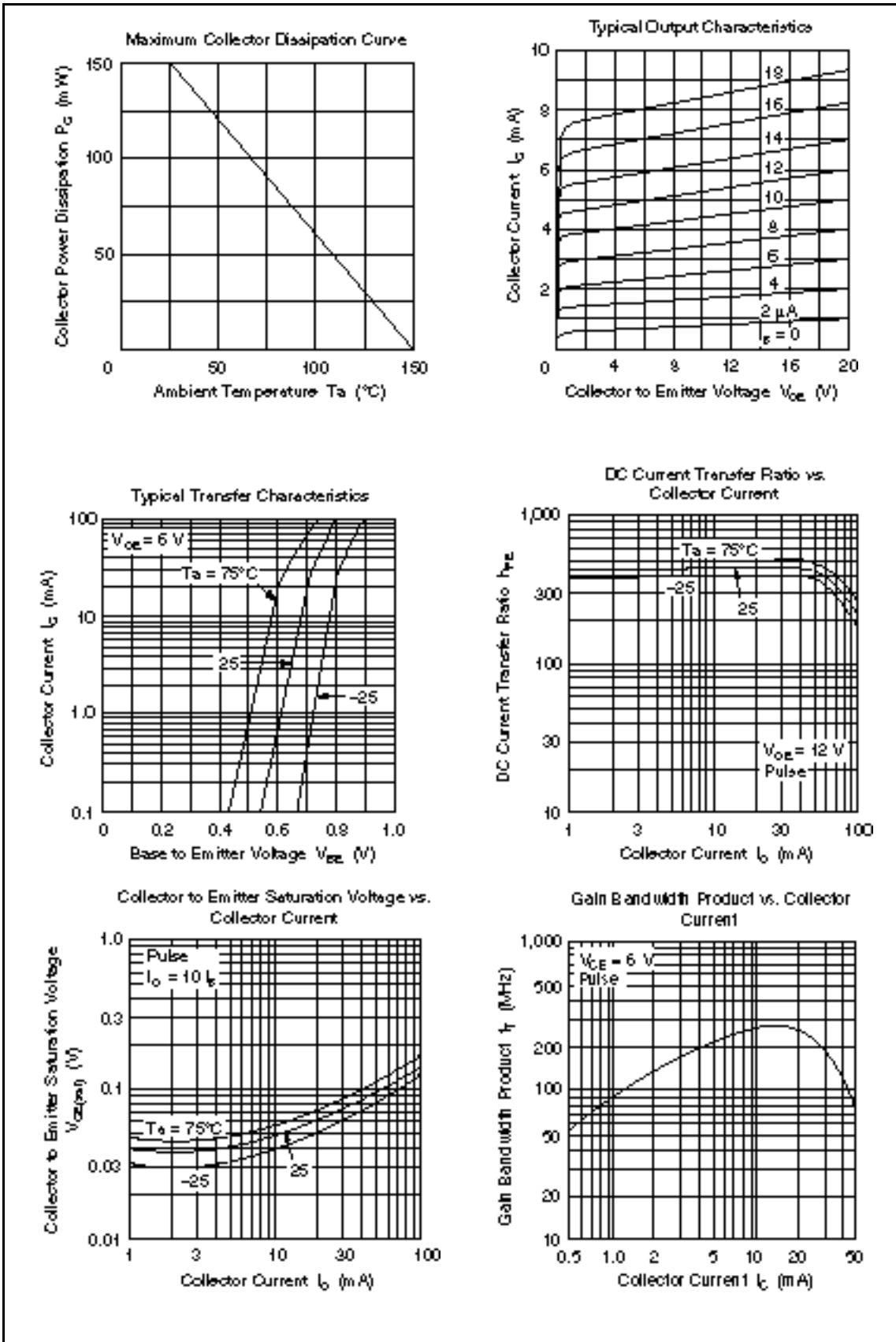
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	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	$I_{CBO}$	—	—	0.1	$\mu A$	$V_{CB} = 70 \text{ V}, I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	0.1	$\mu A$	$V_{EB} = 2 \text{ V}, I_C = 0$
DC current transfer ratio	$h_{FE}^{*1}$	250	—	800		$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.1	V	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}^{*2}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.1	V	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}^{*2}$

Notes: 1. The 2SC4050 is grouped by  $h_{FE}$  as follows.

2. Pulse test

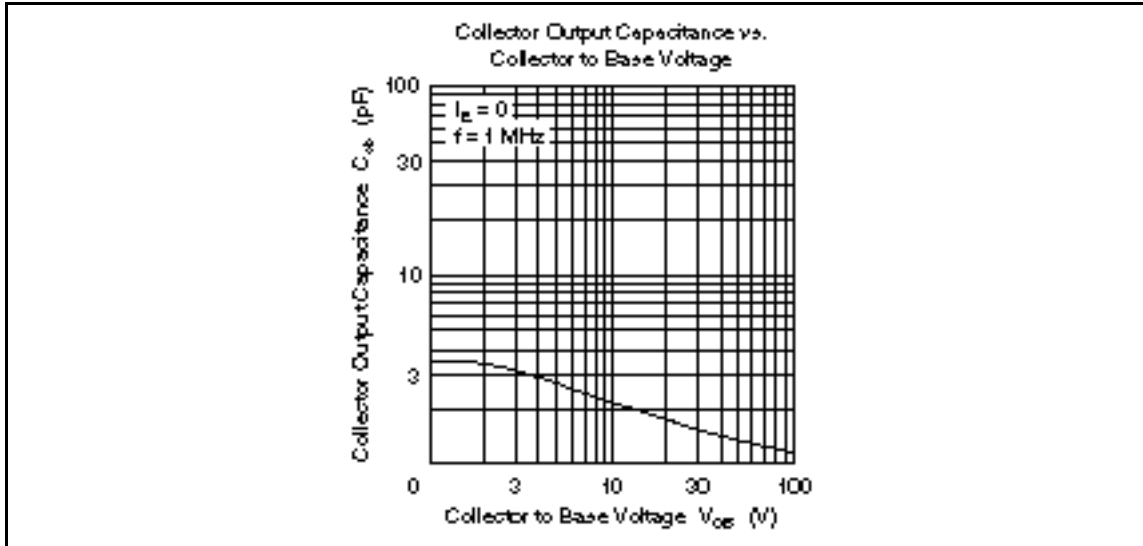
Grade	D	E
Mark	KID	KIE
$h_{FE}$	250 to 500	400 to 800



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## 2SC4050

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# HITACHI

## **Hitachi, Ltd.**

Semiconductor & IC Div.  
Nippon Bldg., 2-6-2, Ohite-machi, Chiyoda-ku, Tokyo 100, Japan  
Tel Tokyo (03) 3270-2111  
Fax (03) 3270-5109

For further information write to:

Hitachi America, Ltd.  
Semiconductor & IC Div.  
2000 Sierra Point Parkway  
Brisbane, CA. 94005-4835  
U.S.A.  
Tel 415-589-8300  
Fax 415-589-4207

Hitachi Europe GmbH  
Electronic Components Group  
Continental Europe  
Dornacher StraÙe 3  
D-85622 Feldkirchen  
München  
Tel 089-9 94 80 0  
Fax 089-9 29 30 00

Hitachi Europe Ltd.  
Electronic Components Div.  
Northern Europe Headquarters  
Whitbrook Park  
Lower Cookham Road  
M Maidenhead  
Berkshire SL6 8YA  
United Kingdom  
Tel 0628-885000  
Fax 0628-778322

Hitachi Asia Pte. Ltd.  
45 Collyer Quay #20-00  
Hitachi Tower  
Singapore 0404  
Tel 535-2100  
Fax 535-1533

Hitachi Asia (Hong Kong) Ltd.  
Unit 705, North Tower,  
World Finance Centre  
Harbour City, Canton Road  
Tsim Sha Tsui, Kowloon  
Hong Kong  
Tel 27359218  
Fax 27308074