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# 2SC5206

Silicon NPN Triple Diffused

## HITACHI

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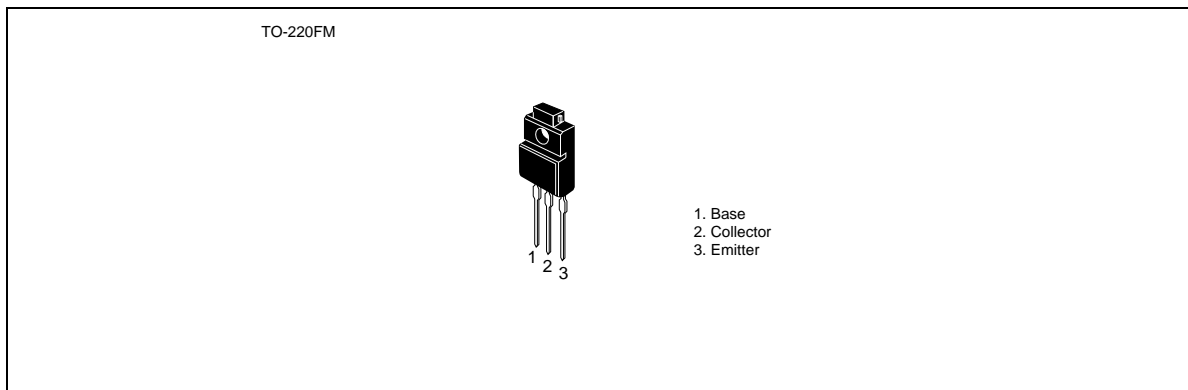
### Application

High power switching

### Features

- High breakdown voltage  
 $V_{CBO} = 500 \text{ V}$
- Isolated package  
TO-220FM

### Outline



## 2SC5206

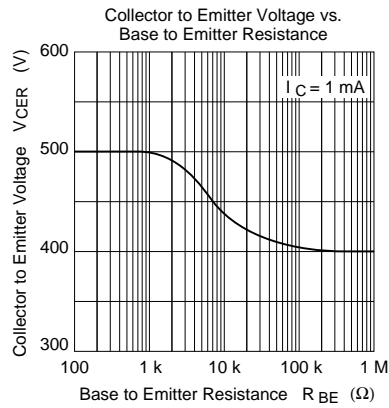
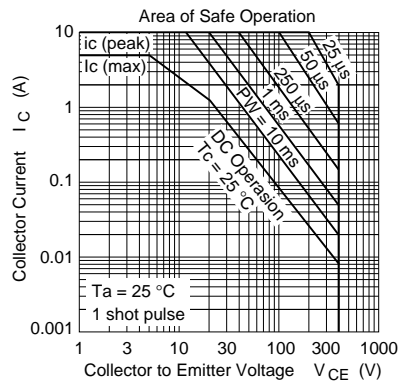
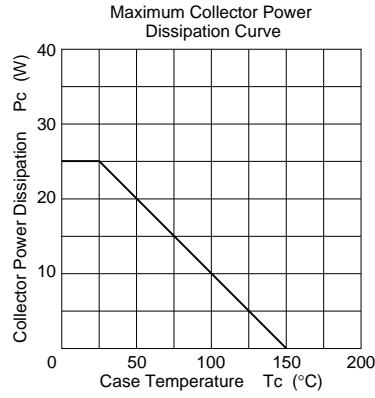
### Absolute Maximum Ratings (Ta = 25°C)

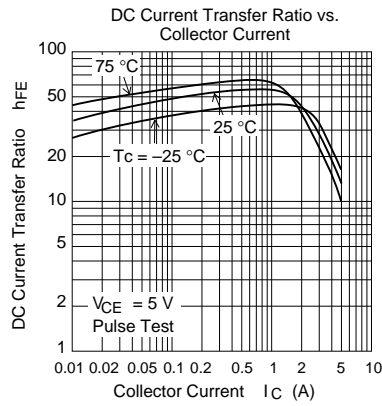
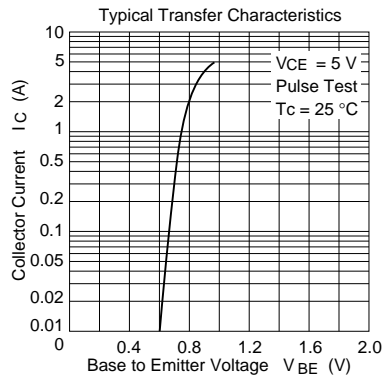
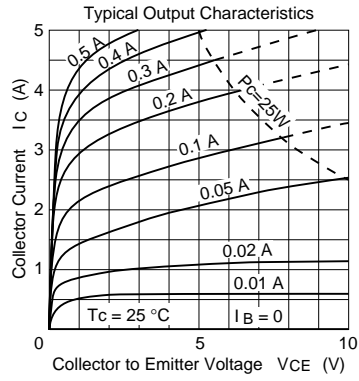
Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	500	V
Collector to emitter voltage	$V_{CEO}$	400	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	5	A
Collector peak current	$I_{C(peak)}$	10	A
Collector power dissipation	$P_C$	1.8	W
Collector power dissipation	$P_C^{*1}$	25	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

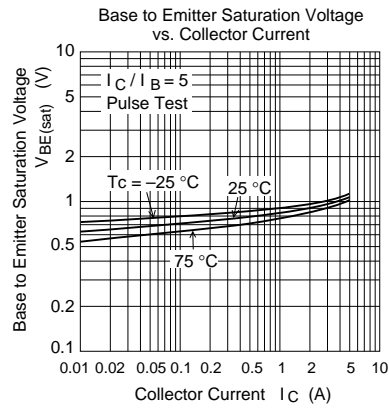
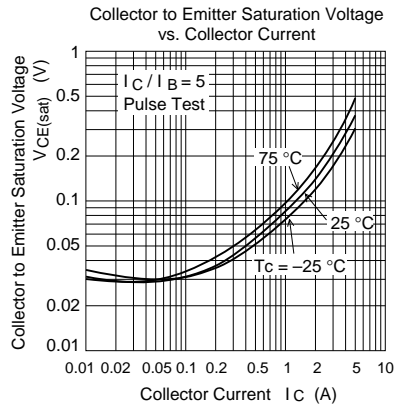
Note: 1. Value at  $T_C = 25^\circ\text{C}$

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

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	500	—	—	V	$I_C = 100 \mu\text{A}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	400	—	—	V	$I_C = 10 \text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	$I_E = 10 \text{ mA}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	100	$\mu\text{A}$	$V_{CB} = 400 \text{ V}$ , $I_E = 0$
Collector cutoff current	$I_{CEO}$	—	—	100	$\mu\text{A}$	$V_{CE} = 350 \text{ V}$ , $R_{BE} = 0$
DC current transfer ratio	$h_{FE}$	20	—	—		$V_{CE} = 5 \text{ V}$ , $I_C = 2.5 \text{ A}$
DC current transfer ratio	$h_{FE}$	18	—	—		$V_{CE} = 5 \text{ V}$ , $I_C = 1 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1.0	V	$I_C = 2.5 \text{ A}$ , $I_B = 0.5 \text{ A}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C = 2.5 \text{ A}$ , $I_B = 0.5 \text{ A}$
Turn on time	$t_{on}$	—	0.5	—	$\mu\text{sec}$	$I_C = 5 \text{ A}$ , $V_{CC} = 150 \text{ V}$ , $I_{B1} = -I_{B2} = 1 \text{ A}$
Storage time	$t_{stg}$	—	2.0	—	$\mu\text{sec}$	$I_C = 5 \text{ A}$ , $V_{CC} = 150 \text{ V}$ , $I_{B1} = -I_{B2} = 1 \text{ A}$
Fall time	$t_f$	—	0.6	—	$\mu\text{sec}$	$I_C = 5 \text{ A}$ , $V_{CC} = 150 \text{ V}$ , $I_{B1} = -I_{B2} = 1 \text{ A}$







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