

2SC5206

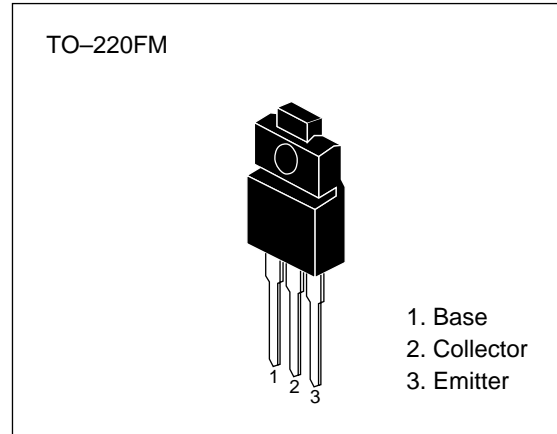
Silicon NPN Triple Diffused

Application

High power switching

Features

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



Absolute Maximum Ratings (Ta = 25°C)

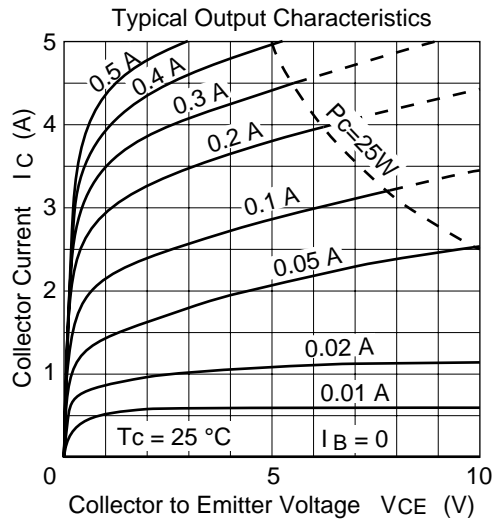
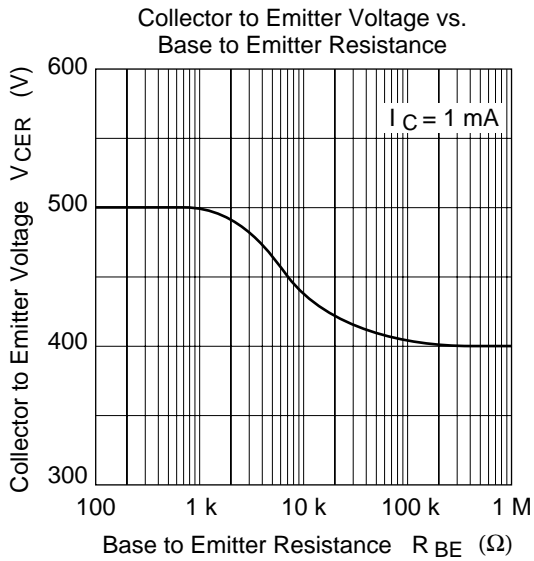
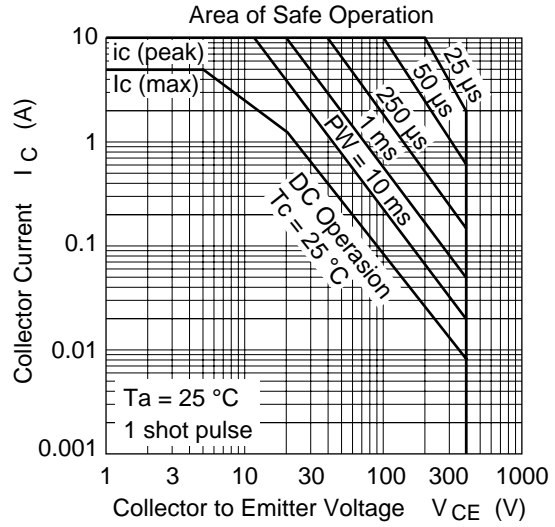
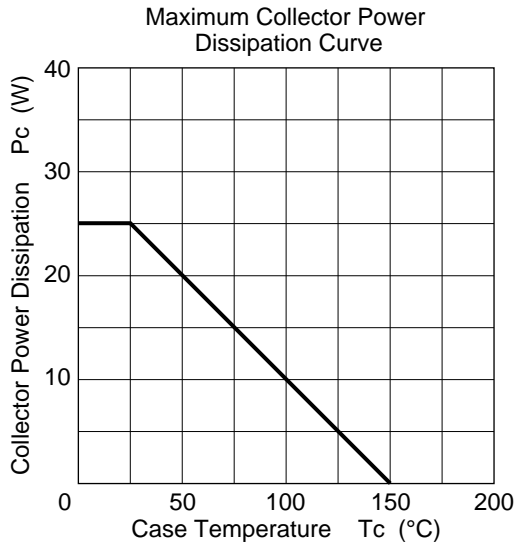
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	500	V
Collector to emitter voltage	V_{CEO}	400	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	5	A
Collector peak current	$i_{c(\text{peak})}$	10	A
Collector power dissipation	P_C	1.8	W
Collector power dissipation	P_C^{*1}	25	W
Junction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

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

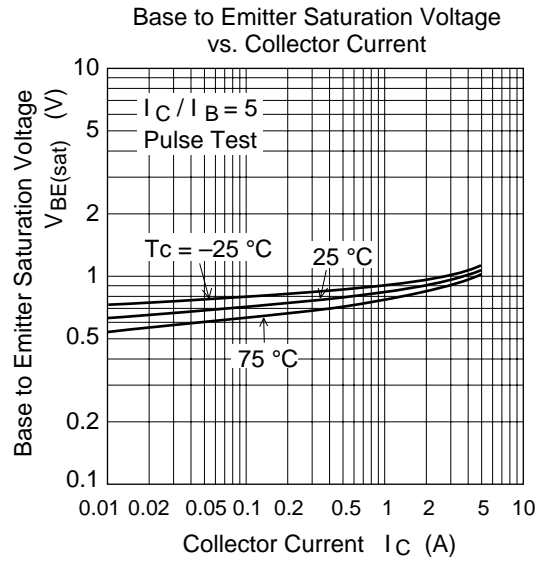
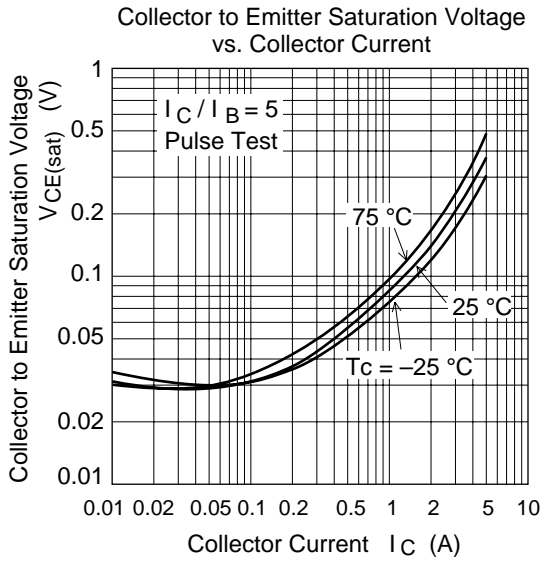
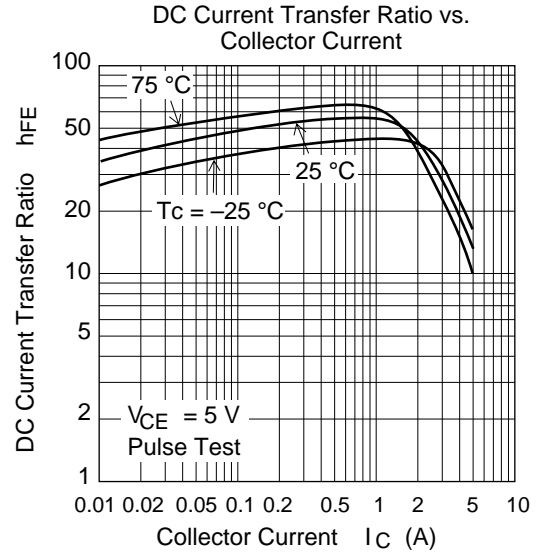
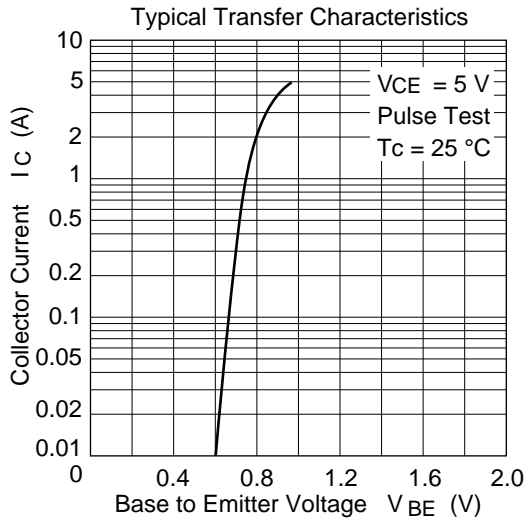
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Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	500	—	—	V	$I_C = 100 \mu A$, $I_E = 0$
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	μA	$V_{CB} = 400 \text{ V}$, $I_E = 0$
Collector cutoff current	I_{CEO}	—	—	100	μA	$V_{CE} = 350 \text{ V}$, $R_{BE} = 0$
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	—	μsec	$I_C = 5 \text{ A}$, $V_{CC} = 150 \text{ V}$, $I_{B1} = -I_{B2} = 1 \text{ A}$
Storage time	t_{stg}	—	2.0	—	μsec	$I_C = 5 \text{ A}$, $V_{CC} = 150 \text{ V}$, $I_{B1} = -I_{B2} = 1 \text{ A}$
Fall time	t_f	—	0.6	—	μsec	$I_C = 5 \text{ A}$, $V_{CC} = 150 \text{ V}$, $I_{B1} = -I_{B2} = 1 \text{ A}$



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Package Outline

