

2SC5788

Silicon NPN epitaxial planar type

Power supply for Audio & Visual equipments
such as TVs and VCRs

Industrial equipments such as DC-DC converters

■ Features

- High-speed switching (t_{stg} : storage time/ t_f : fall time is short)
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Superior forward current transfer ratio h_{FE} linearity
- Allowing automatic insertion with radial tapering

■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V_{CBO}	60	V	
Collector-emitter voltage (Base open)	V_{CEO}	60	V	
Emitter-base voltage (Collector open)	V_{EBO}	6	V	
Collector current	I_C	3	A	
Peak collector current	I_{CP}	6	A	
Collector power dissipation	$T_C = 25^\circ\text{C}$ $T_a = 25^\circ\text{C}$	P_C	15	W
			2	
Junction temperature	T_j	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$	

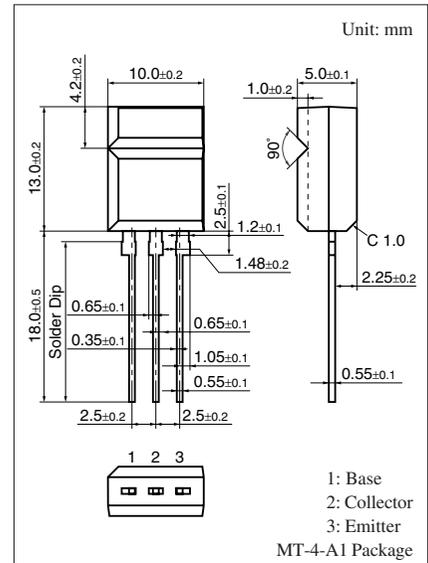
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 10 \text{ mA}$, $I_B = 0$	60			V	
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 60 \text{ V}$, $I_E = 0$			100	μA	
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 60 \text{ V}$, $I_B = 0$			100	μA	
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6 \text{ V}$, $I_C = 0$			1	mA	
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 4 \text{ V}$, $I_C = 1 \text{ A}$	120		320	—	
	h_{FE2}	$V_{CE} = 4 \text{ V}$, $I_C = 3 \text{ A}$	40				
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3 \text{ A}$, $I_B = 375 \text{ mA}$			0.8	V	
Transition frequency	f_T	$V_{CE} = 10 \text{ V}$, $I_C = 0.1 \text{ A}$, $f = 10 \text{ MHz}$		180		MHz	
Turn-on time	t_{on}	$I_C = 1 \text{ A}$, Resistance loaded		0.2	0.3	μs	
Storage time	t_{stg}		$I_{B1} = 0.1 \text{ A}$, $I_{B2} = -0.1 \text{ A}$		0.55	0.7	μs
Fall time	t_f		$V_{CC} = 50 \text{ V}$		0.1	0.15	μs

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

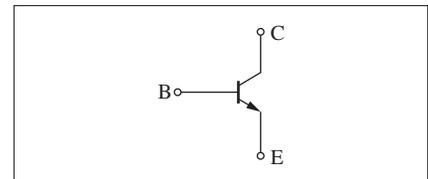
2. *: Rank classification

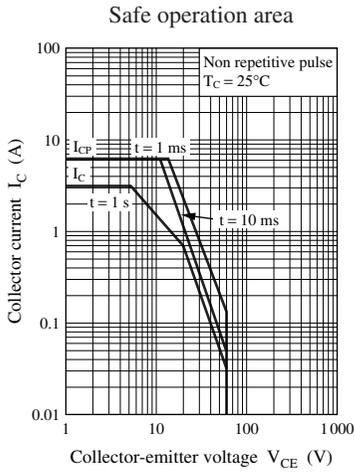
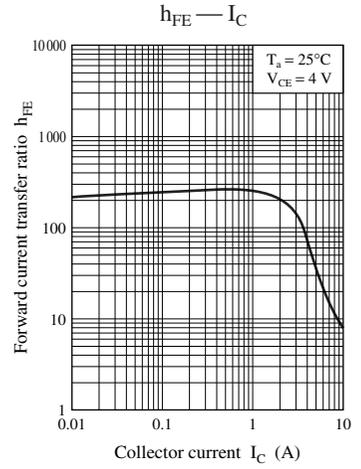
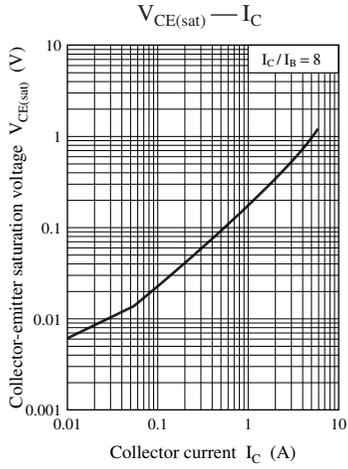
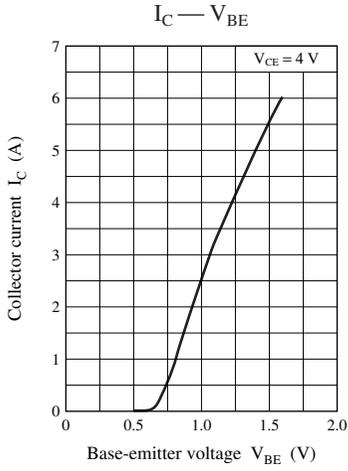
Rank	P	Q
h_{FE1}	160 to 320	120 to 250



Marking Symbol: C5788

Internal Connection





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