

2SD2528

Silicon NPN epitaxial planar type

For power amplification and high-current amplification

■ Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Full-pack package which can be installed to the heat sink with one screw

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	80	V
Collector-emitter voltage (Base open)	V_{CEO}	60	V
Emitter-base voltage (Collector open)	V_{EBO}	6	V
Collector current	I_C	5	A
Peak collector current	I_{CP}	10	A
Base current	I_B	1	A
Collector power dissipation	$T_C = 25^\circ\text{C}$ P_C	40	W
		2.0	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

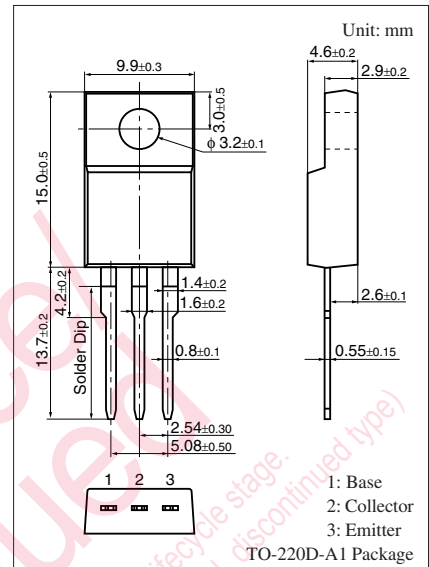
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

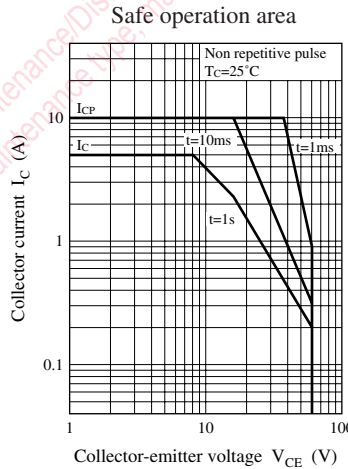
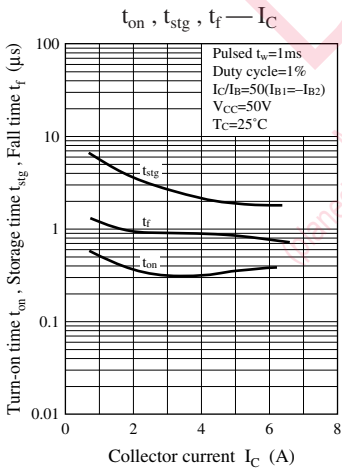
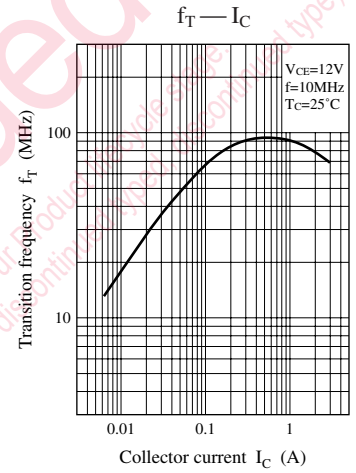
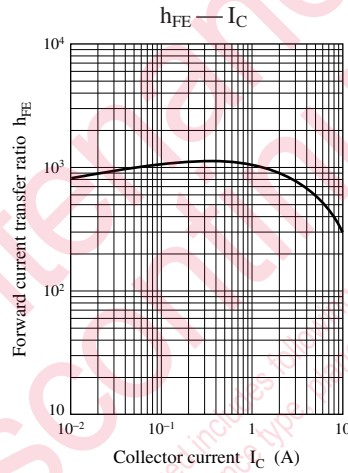
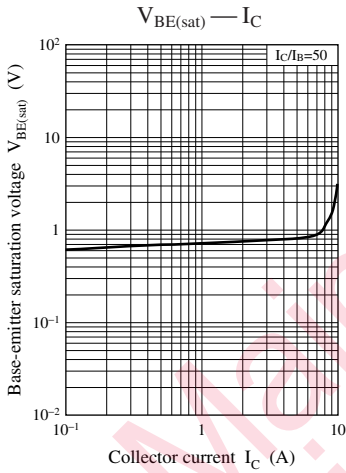
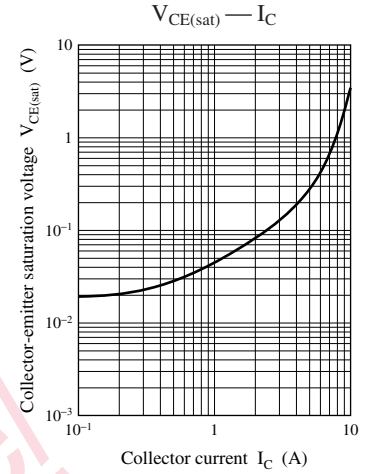
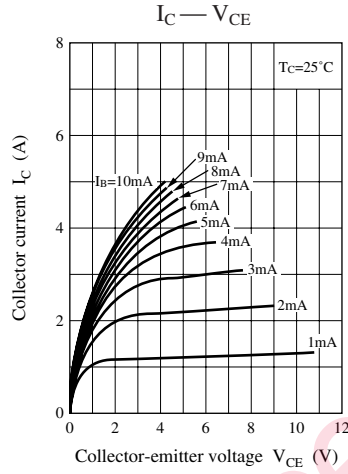
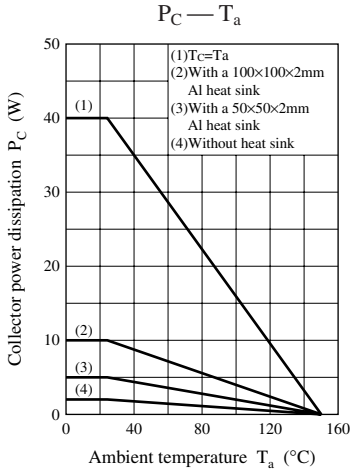
Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 25\text{ mA}, I_B = 0$	60			V	
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 80\text{ V}, I_E = 0$			100	μA	
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$			100	μA	
Forward current transfer ratio	h_{FE}^*	$V_{CE} = 4\text{ V}, I_C = 1\text{ A}$	500		2000	—	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 4\text{ A}, I_B = 0.1\text{ A}$			0.3	V	
Transition frequency	f_T	$V_{CE} = 12\text{ V}, I_C = 0.4\text{ A}, f = 10\text{ MHz}$		30		MHz	
Turn-on time	t_{on}	$I_C = 4\text{ A}, I_{B1} = 0.08\text{ A}, I_{B2} = -0.08\text{ A}$ $V_{CC} = 50\text{ V}$		0.4		μs	
Storage time	t_{stg}				2.0		μs
Fall time	t_f				0.6		μs

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

2. *: Rank classification

Rank	Q	P
h_{FE1}	500 to 1200	800 to 2000





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