

2SD1719

Silicon NPN Epitaxial Planar Type

High DC Current Gain (h_{FE}), Power Amplifier

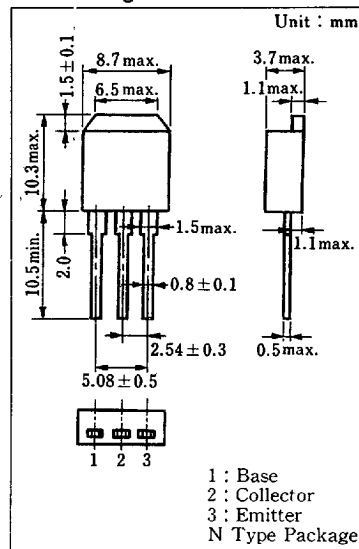
■ Features

- High DC current gain (h_{FE})
- Good linearity of DC current gain (h_{FE})
- High emitter-base voltage (V_{EBO})
- "N Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	15	V
Peak collector current	I_{CP}	12	A
Collector current	I_C	6	A
Base current	I_B	3	A
Collector power dissipation	P_C	40	W
		1.3	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Package Dimensions



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=100\text{ V}, I_E=0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=15\text{ V}, I_C=0$			100	μA
Collector-emitter voltage	V_{CEO}	$I_C=25\text{ mA}, I_B=0$	60			V
DC current gain	h_{FE}^*	$V_{CE}=4\text{ V}, I_C=1\text{ A}$	300		2000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=5\text{ A}, I_B=0.1\text{ A}$			0.5	V
Transition frequency	f_T	$V_C=12\text{ V}, I_B=0.5\text{ A}, f=10\text{ MHz}$		30		MHz
Turn-on time	t_{on}	$I_C=5\text{ A}, I_{B1}=0.1\text{ A}, I_{B2}=-0.1\text{ A}$ $V_{CC}=50\text{ V}$		0.3		μs
Storage time	t_{sig}			1.5		μs
Fall time	t_f			0.6		μs

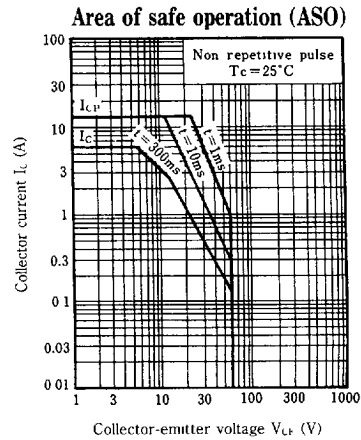
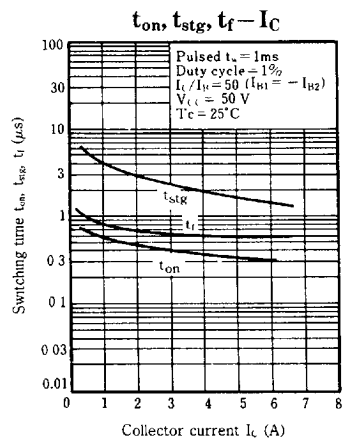
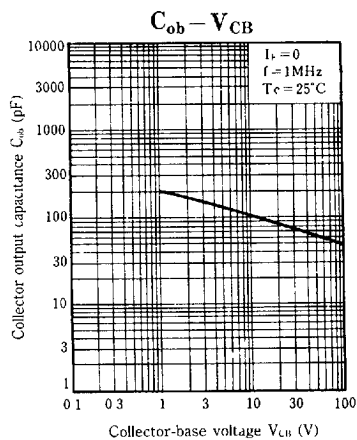
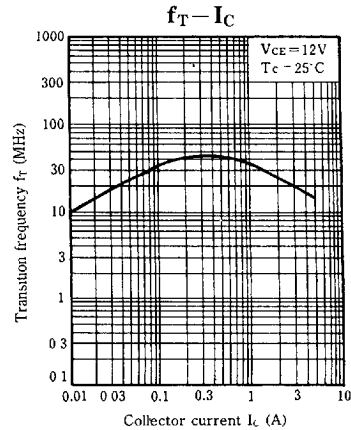
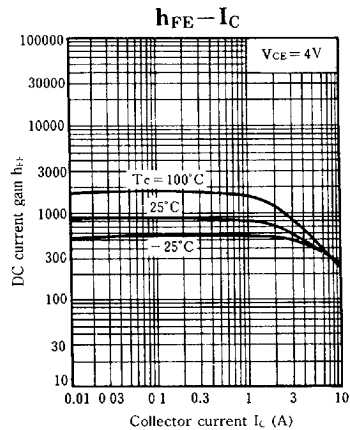
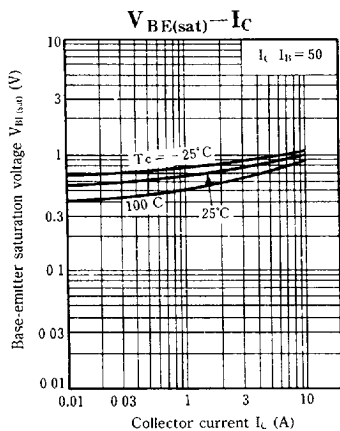
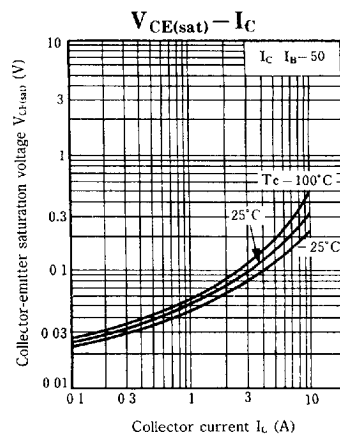
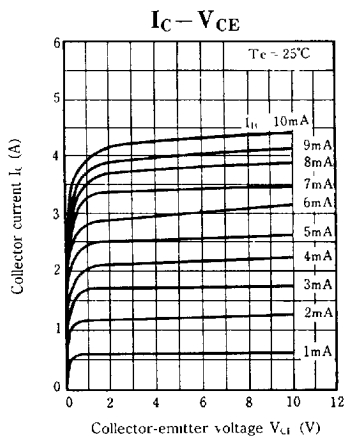
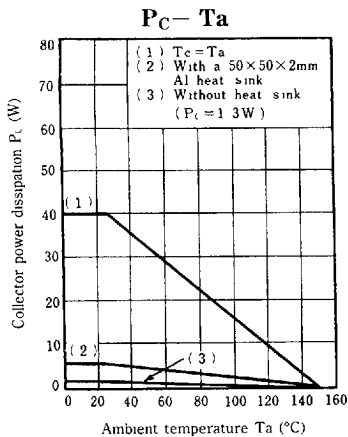
* h_{FE} Classifications

Class	Q	P
h_{FE}	300~1200	800~2000

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Note) Refer to P.643 (on 2SD1257) for $R_{th(j-a)}$ - t characteristics.

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