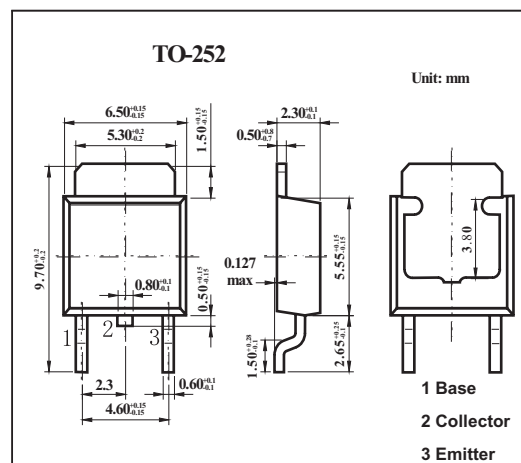


Silicon NPN Triple Diffusion Planar Type

2SD1719

■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- High emitter-base voltage (Collector open) V_{EBO}

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	15	V
Collector current	I_C	6	A
Peak collector current	I_{CP}	12	A
Base current	I_B	3	A
Collector power dissipation	P_C	40	W
$T_a = 25^\circ\text{C}$		1.3	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter voltage	V_{CEO}	$I_C = 25\text{ mA}, I_B = 0$	60			V
Collector-base cutoff current	I_{CBO}	$V_{CB} = 100\text{ V}, I_E = 0$			100	μA
Emitter-base cutoff current	I_{EBO}	$V_{EB} = 15\text{ V}, I_C = 0$			100	μA
Forward current transfer ratio	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	$V_{CE} = 12\text{ V}, I_C = 0.5\text{ A}, f = 10\text{ MHz}$		30		MHz
Turn-on time	t_{on}	$I_C = 5\text{ A}, I_{B1} = -I_{B2} = 0.1\text{ A}, V_{CC} = 50\text{ V}$		0.3		μs
Storage time	t_{stg}			1.5		μs
Fall time	t_f			0.6		μs

■ h_{FE} Classification

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