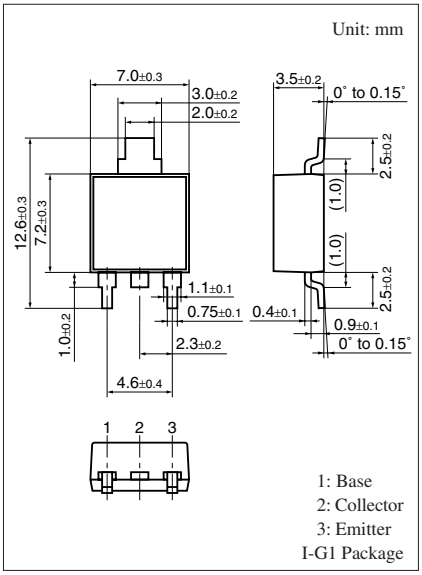
2SD1741, 2SD1741A

Silicon NPN triple diffusion planar type

For power amplification
For TV vertical deflection output
Complementary to 2SB1171 and 2SB1171A



Note) Self-supported type package is also prepared.

■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- I type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment

■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)	2SD1741	V_{CBO}	200	V
	2SD1741A		200	
Collector-emitter voltage (Base open)	2SD1741	V_{CEO}	150	V
	2SD1741A		180	
Emitter-base voltage (Collector open)		V_{EBO}	6	V
Collector current		I_C	2	A
Peak collector current		I_{CP}	3	A
Collector power dissipation		P_C	15	W
	$T_a = 25°C$		1.3	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

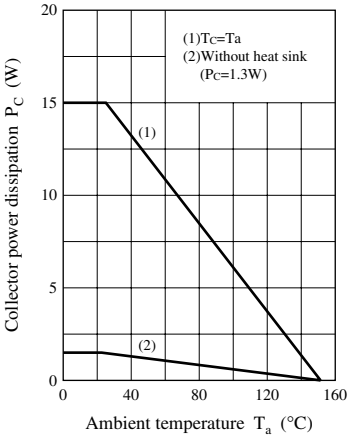
■ Electrical Characteristics $T_C = 25°C \pm 3°C$

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)		V_{CBO}	$I_C = 50\ \mu A$, $I_E = 0$	200			V
Collector-emitter voltage (Base open)	2SD1741	V_{CEO}	$I_C = 5$ mA, $I_B = 0$	150			V
	2SD1741A			180			
Emitter-base voltage (Collector open)		V_{EBO}	$I_E = 500\ \mu A$, $I_C = 0$	6			V
Base-emitter voltage		V_{BE}	$V_{CE} = 10$ V, $I_C = 400$ mA			1.0	V
Collector-base cutoff current (Emitter open)		I_{CBO}	$V_{CB} = 200$ V, $I_E = 0$			50	μA
Emitter-base cutoff current (Collector open)		I_{EBO}	$V_{EB} = 4$ V, $I_C = 0$			50	μA
Forward current transfer ratio		h_{FE1} *	$V_{CE} = 10$ V, $I_C = 150$ mA	60		240	—
		h_{FE2}	$V_{CE} = 10$ V, $I_C = 400$ mA	50			
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 500$ mA, $I_B = 50$ mA			1.0	V
Transition frequency		f_T	$V_{CE} = 10$ V, $I_C = 0.5$ A, f = 1 MHz		20		MHz

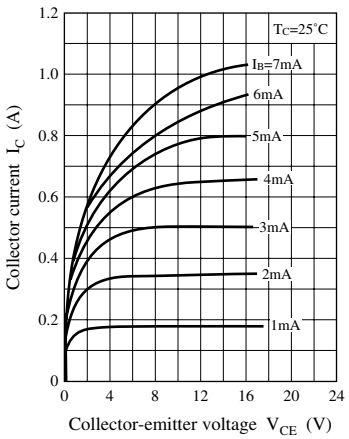
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

Rank	Q	P
h_{FE1}	60 to 140	100 to 240

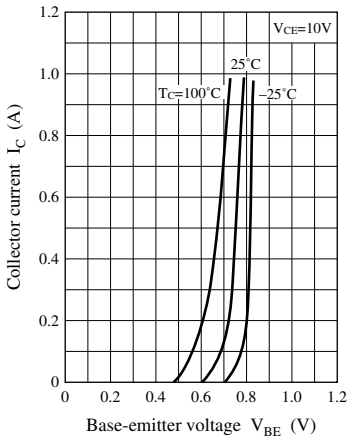
P_C — T_a



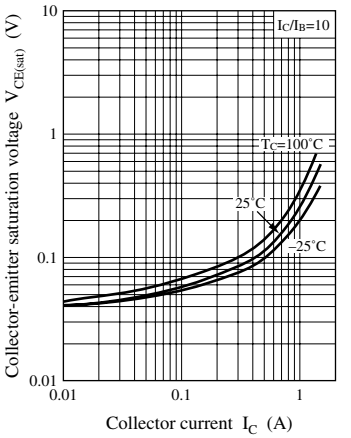
I_C — V_{CE}



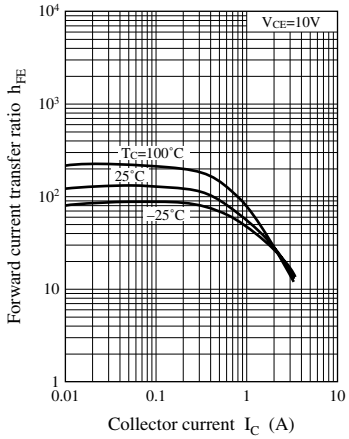
I_C — V_{BE}



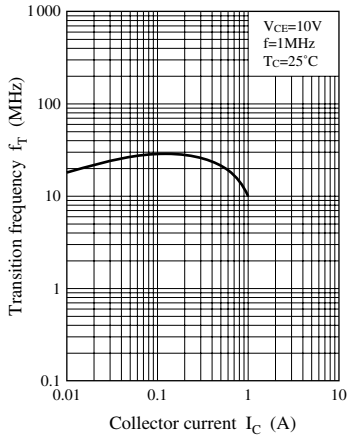
$V_{CE(sat)}$ — I_C



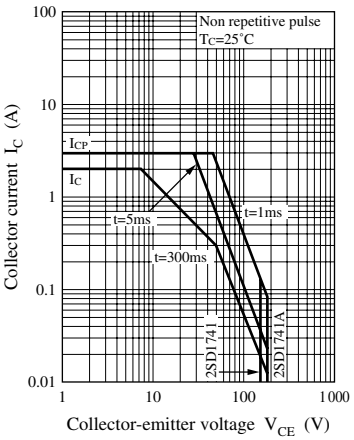
h_{FE} — I_C



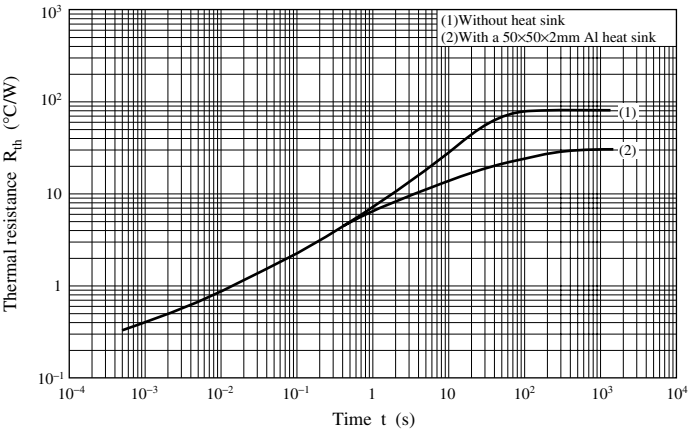
f_T — I_C



Safe operation area



R_{th} — t



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