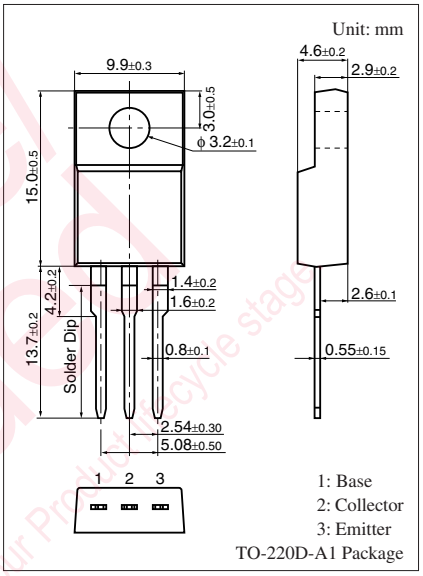
This product complies with the RoHS Directive (EU 2002/95/EC).

2SD2374A

Silicon NPN triple diffusion planar type

For power amplification

Complementary to 2SB1548A



■ Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter		Symbol	Rating	Unit
Collector-base voltage (Emitter open)		V_{CBO}	80	V
Collector-emitter voltage (Base open)		V_{CEO}	80	V
Emitter-base voltage (Collector open)		V_{EBO}	6	V
Collector current		I_C	3	A
Peak collector current		I_{CP}	5	A
Collector power dissipation	$T_C = 25°C$	P_C	25	W
			2.0	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	–55 to +150	°C

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 30$ mA, $I_B = 0$	80			V
Base-emitter voltage	V_{BE}	$V_{CE} = 4$ V, $I_C = 3$ A			1.8	V
Collector-emitter cutoff current (E-B short)	I_{CES}	$V_{CE} = 80$ V, $V_{BE} = 0$			200	µA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 60$ V, $I_B = 0$			300	µA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6$ V, $I_C = 0$			1	mA
Forward current transfer ratio	h_{FE1} *	$V_{CE} = 4$ V, $I_C = 1$ A	70		250	—
	h_{FE2}	$V_{CE} = 4$ V, $I_C = 3$ A	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3$ A, $I_B = 0.375$ A			1.2	V
Transition frequency	f_T	$V_{CE} = 10$ V, $I_C = 0.5$ A, f = 10 MHz		30		MHz
Turn-on time	t_{on}	$I_C = 1$ A, $I_{B1} = 0.1$ A, $I_{B2} = -0.1$ A		0.5		µs
Storage time	t_{stg}	$V_{CC} = 50$ V		2.5		µs
Fall time	t_f			0.4		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}	70 to 150	120 to 250

Maintenance/Discontinued
Maintenance/Discontinued includes following four Product lifecycle stages planed maintenance type maintenance type planed discontinued typed discontinued type
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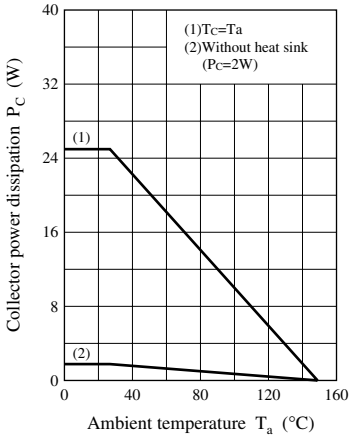
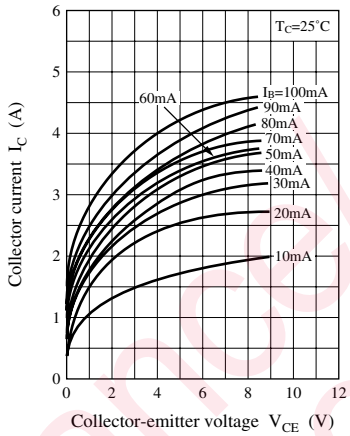
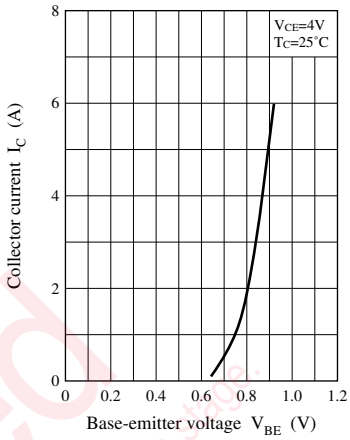
P_C — T_a



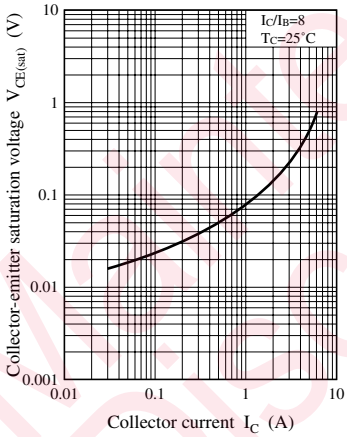
I_C — V_{CE}



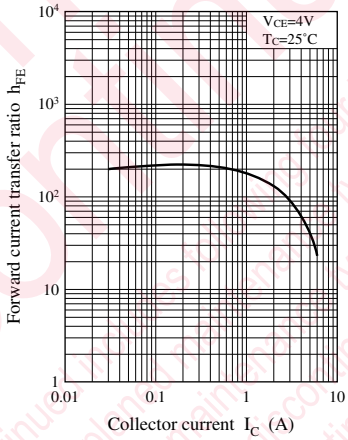
I_C — V_{BE}



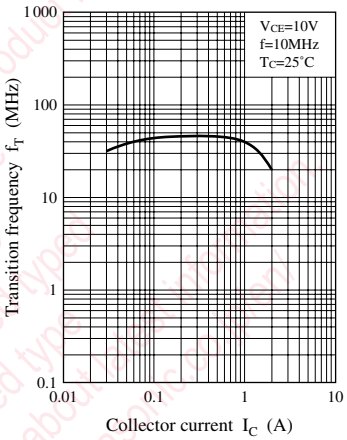
$V_{CE(sat)}$ — I_C



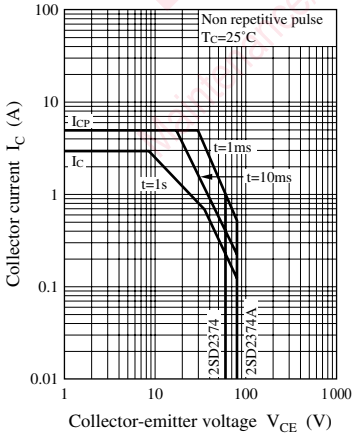
h_{FE} — I_C



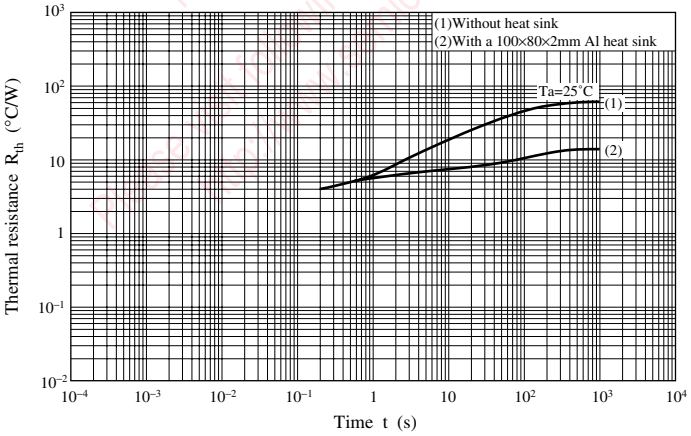
f_T — I_C



Safe operation area



R_{th} — t



Maintenance/Discontinued
Discontinued
Maintenance/Discontinued
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