

2SD1272

Silicon NPN Triple-Diffused Planar Type

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

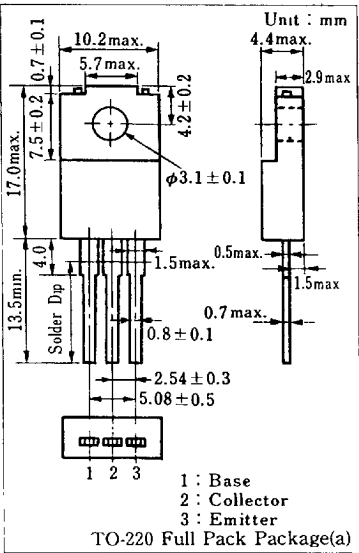
Features

- High DC current gain (h_{FE})
- Good linearity of DC current gain (h_{FE})
- “Full Pack” package for simplified mounting on a heat sink with one screw

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

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	200	V
Collector-emitter voltage	V_{CE0}	150	V
Emitter-base voltage	V_{EB0}	6	V
Peak collector current	I_{CP}	2.5	A
Collector current	I_C	1	A
Base current	I_B	0.1	A
Collector power dissipation	$T_c = 25^{\circ}\text{C}$	P_C 40	W
	$T_a = 25^{\circ}\text{C}$	2	
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$

Package Dimensions



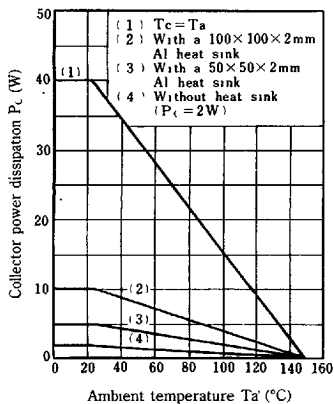
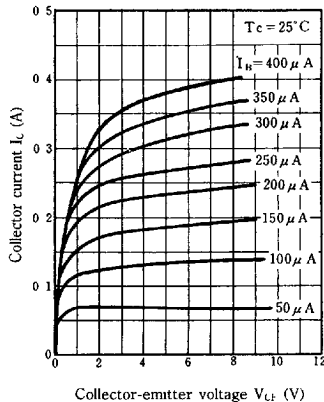
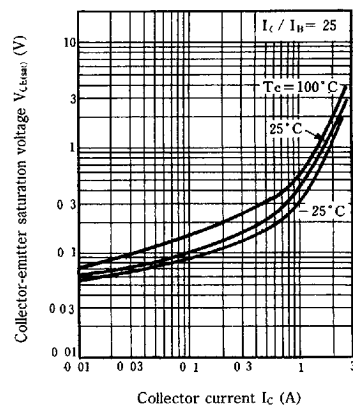
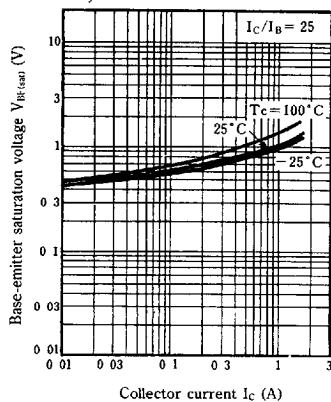
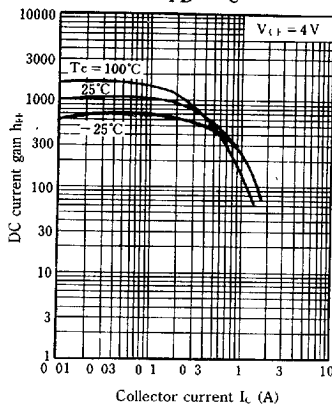
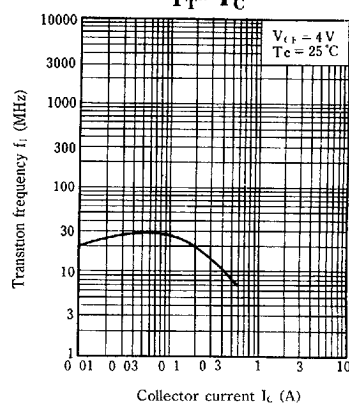
Electrical Characteristics ($T_c=25^{\circ}\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CB0}	$V_{CB} = 200\text{ V}, I_E = 0$			100	μA
Emitter cutoff current	I_{EB0}	$V_{EB} = 6\text{ V}, I_C = 0$			100	μA
Collector-emitter voltage	V_{CE0}	$I_C = 25\text{ mA}, I_B = 0$	150			V
DC current gain	h_{FE}^*	$V_{CE} = 4\text{ V}, I_C = 0.2\text{ A}$	500		2000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 0.5\text{ A}, I_B = 0.02\text{ A}$			1	V
Transition frequency	f_T	$V_{CE} = 4\text{ V}, I_C = 0.1\text{ A}, f = 10\text{ MHz}$		25		MHz

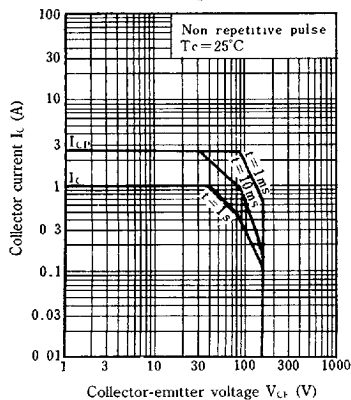
* h_{FE} Classifications

Class	Q	P
h_{FE}	500~1200	800~2000

6932852 0016674 722

$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 