

2SD1274, 2SD1274A, 2SD1274B

Silicon NPN triple diffusion planar type

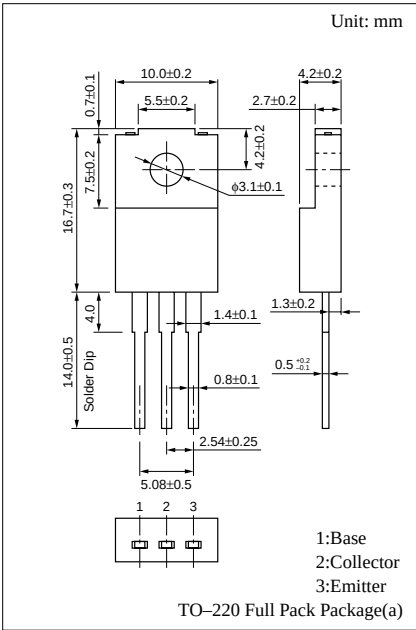
For power amplification

Features

- High collector to base voltage V_{CBO}
- High-speed switching
- Full-pack package which can be installed to the heat sink with one screw

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

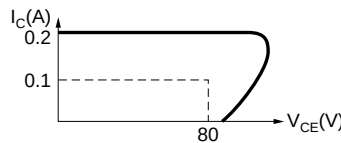
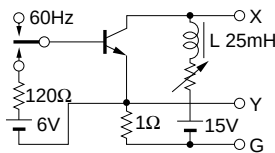
Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	150	V
		200	
		250	
Collector to emitter voltage	V_{CES}	150	V
		200	
		250	
Collector to emitter voltage	V_{CEO}	80	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	5	A
Collector power dissipation	$T_C=25^\circ\text{C}$	40	W
	$T_a=25^\circ\text{C}$	2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

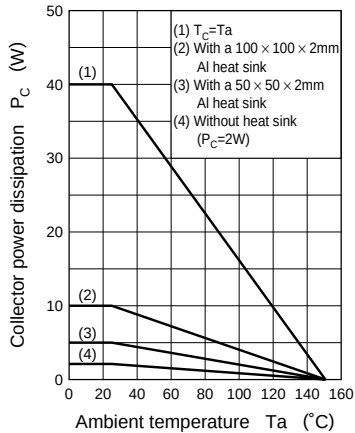
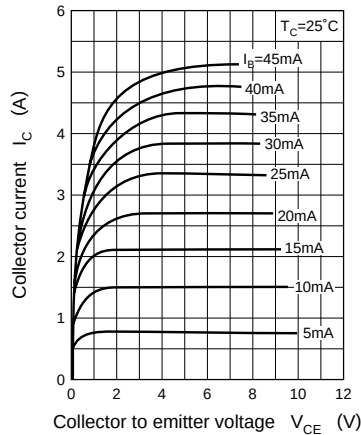
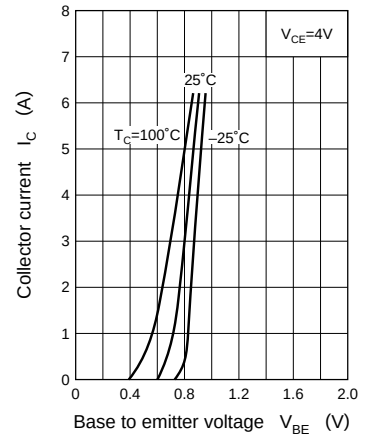
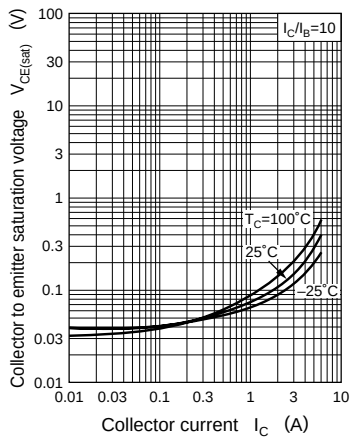
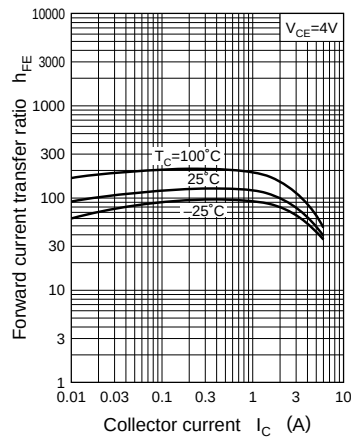
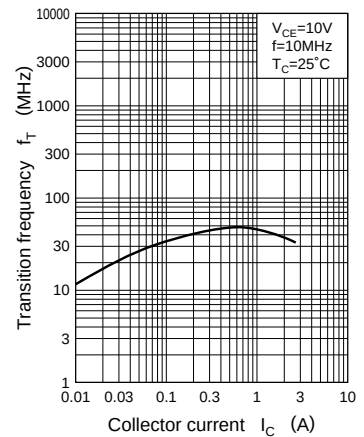
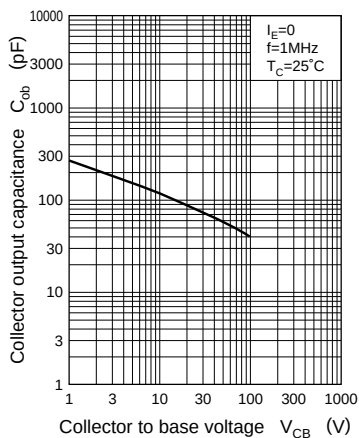


Electrical Characteristics ($T_C=25^\circ\text{C}$)

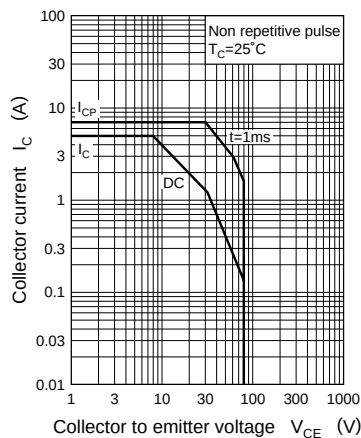
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 150\text{V}, I_E = 0$			1	mA
		$V_{CB} = 200\text{V}, I_E = 0$			1	
		$V_{CB} = 250\text{V}, I_E = 0$			1	
Collector to emitter voltage	$V_{CEO(sus)}^*$	$I_C = 0.2\text{A}, L = 25\text{mH}$	80			V
Emitter to base voltage	V_{EBO}	$I_E = 1\text{mA}, I_C = 0$	6			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 4\text{V}, I_C = 5\text{A}$	14			
Base to emitter voltage	V_{BE}	$V_{CE} = 4\text{V}, I_C = 5\text{A}$			1.5	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 1\text{A}$			1.6	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 0.5\text{A}, f = 10\text{MHz}$		40		MHz
Fall time	t_f	$I_C = 5\text{A}, I_{B1} = 0.8\text{A}, V_{EB} = -5\text{V}$			1	μs

* $V_{CEO(sus)}$ Test circuit



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

Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO

