

2SD1776, 2SD1776A

Silicon NPN triple diffusion planar type

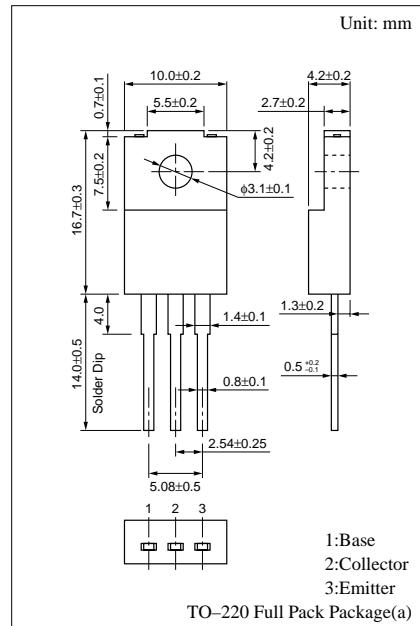
For power amplification with high forward current transfer ratio

■ Features

- High forward current transfer ratio h_{FE}
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Full-pack package which can be installed to the heat sink with one screw

■ Absolute Maximum Ratings (T_C=25°C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SD1776	V_{CBO}	80	V
	2SD1776A		100	
Collector to emitter voltage	2SD1776	V_{CEO}	60	V
	2SD1776A		80	
Emitter to base voltage		V_{EBO}	6	V
Peak collector current		I_{CP}	4	A
Collector current		I_C	2	A
Base current		I_B	0.5	A
Collector power dissipation	$T_C=25^\circ C$	P_C	25	W
	$T_A=25^\circ C$		2	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	-55 to +150	°C

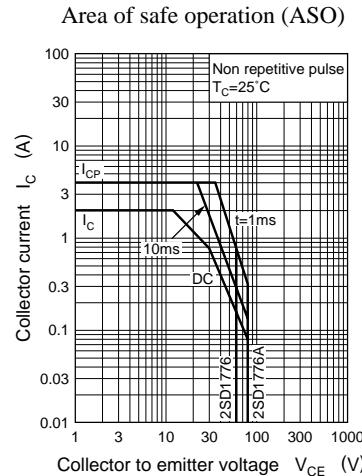
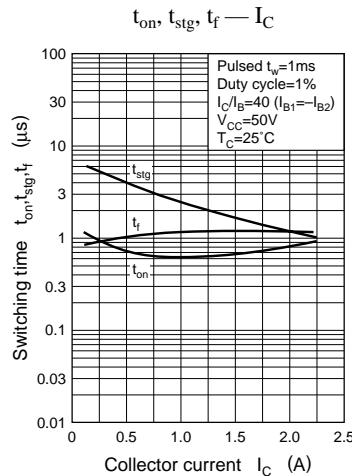
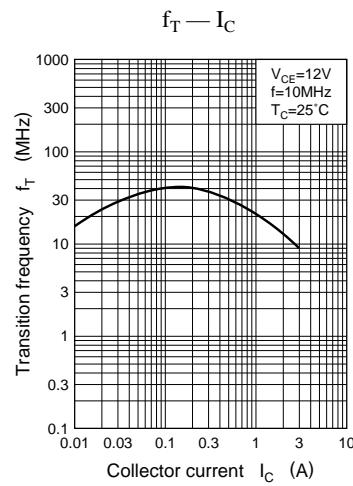
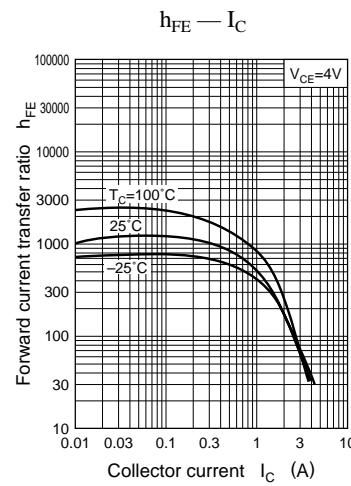
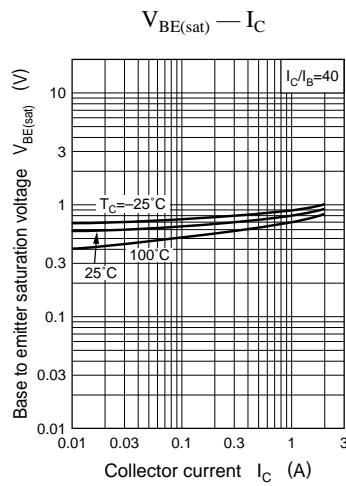
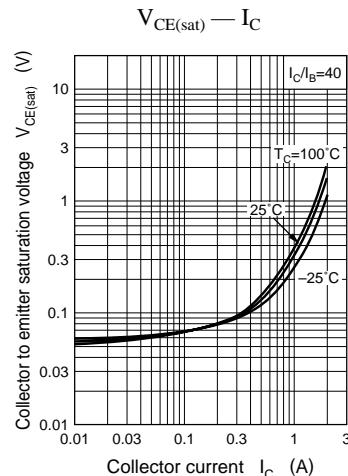
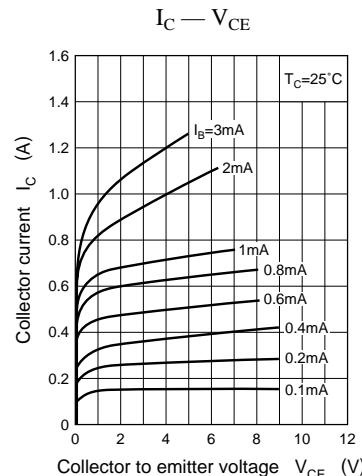
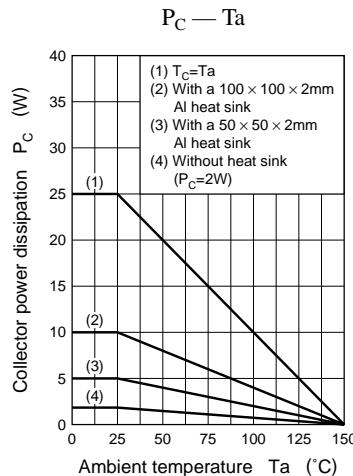


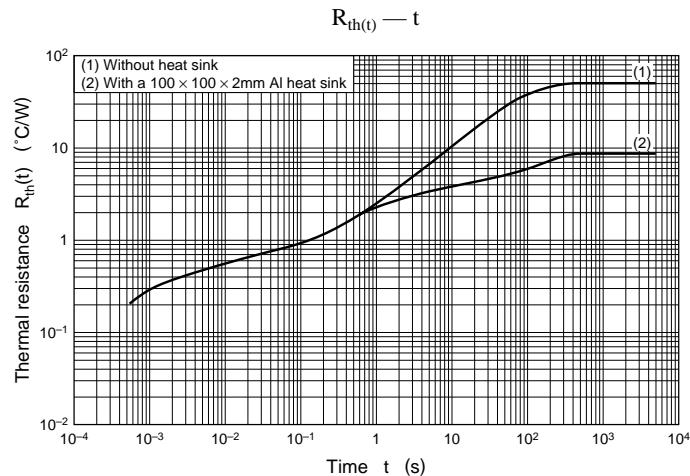
■ Electrical Characteristics ($T_C=25^\circ\text{C}$)

Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	2SD1776	I _{CB}	V _{CB} = 80V, I _E = 0			100	μA
	2SD1776A		V _{CB} = 100V, I _E = 0			100	
Collector cutoff current		I _{CEO}	V _{CE} = 40V, I _B = 0			100	μA
Emitter cutoff current		I _{EBO}	V _{EB} = 6V, I _C = 0			100	μA
Collector to emitter voltage	2SD1776	V _{CEO}	I _C = 25mA, I _B = 0	60			V
	2SD1776A			80			
Forward current transfer ratio		h _{FE} *	V _{CE} = 4V, I _C = 300mA	500		1500	
Collector to emitter saturation voltage		V _{CE(sat)}	I _C = 1A, I _B = 25mA			1	V
Base to emitter saturation voltage		V _{BE(sat)}	I _C = 1A, I _B = 25mA			1.2	V
Transition frequency		f _T	V _{CE} = 12V, I _C = 200mA, f = 10MHz	40			MHz
Collector output capacitance		C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz		30		pF
Turn-on time		t _{on}	I _C = 1A, I _{B1} = 25mA, I _{B2} = -25mA, V _{CC} = 50V		0.6		μs
Storage time		t _{stg}			2.5		μs
Fall time		t _f			1		μs

*h_{EE} Rank classification

Rank	Q	P
h_{FE}	500 to 1000	800 to 1500





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