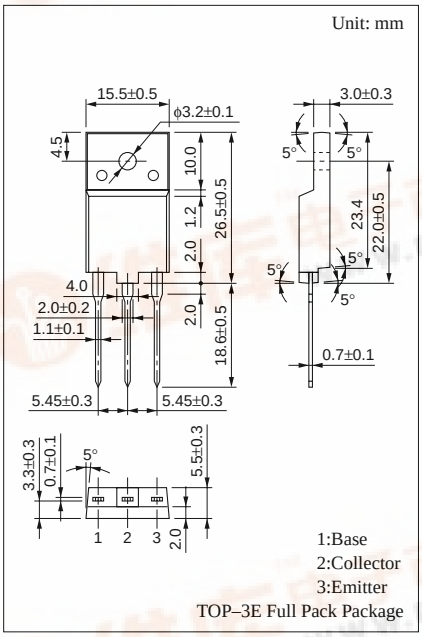
2SC5294, 2SC5294A

Silicon NPN triple diffusion mesa type

For horizontal deflection output



Features

- High breakdown voltage, and high reliability through the use of a glass passivation layer
- High-speed switching
- Wide area of safe operation (ASO)

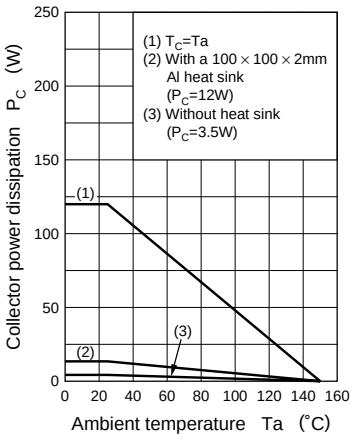
Absolute Maximum Ratings (Ta=25˚C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SC5294	V_{CBO}	1500	V
	2SC5294A		1600	
Collector to base voltage	2SC5294	V_{CES}	1500	V
	2SC5294A		1600	
Collector to emitter voltage		V_{CEO}	600	V
Emitter to base voltage		V_{EBO}	5	V
Peak collector current		I_{CP}	30	A
Collector current		I_C	20	A
Base current		I_B	10	A
Collector power dissipation	T_C=25°C	P_C	120	W
	Ta=25°C		3.5	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

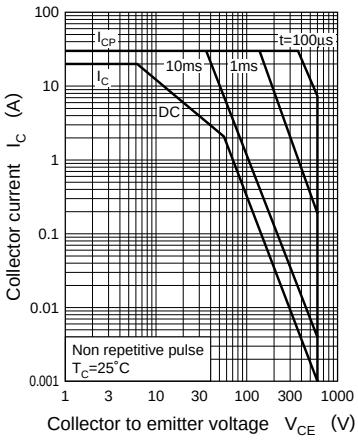
Electrical Characteristics (T_C=25˚C)

Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	2SC5294	I_{CBO}	V_{CB} = 1000V, I_E = 0			50	μA
	2SC5294A					50	
	2SC5294		V_{CB} = 1500V, I_E = 0			1	mA
	2SC5294A		V_{CB} = 1600V, I_E = 0			1	
Emitter cutoff current		I_{EBO}	V_{EB} = 5V, I_C = 0			50	μA
Forward current transfer ratio		h_{FE}	V_{CE} = 5V, I_C = 10A	5		12	
Collector to emitter saturation voltage		$V_{CE(sat)}$	I_C = 10A, I_B = 2.8A			3	V
Base to emitter saturation voltage		$V_{BE(sat)}$	I_C = 10A, I_B = 2.8A			1.5	V
Transition frequency		f_T	V_{CE} = 10V		3		MHz
Storage time		t_{stg}	I_C = 12A, I_{B1} = 2.4A, I_{B2} = –4.8A		1.5	2.5	μs
Fall time		t_f			0.12	0.2	μs

P_C — Ta



Area of safe operation (ASO)



Area of safe operation, horizontal operation ASO