

# 2SD2057

Silicon NPN triple diffusion planar type

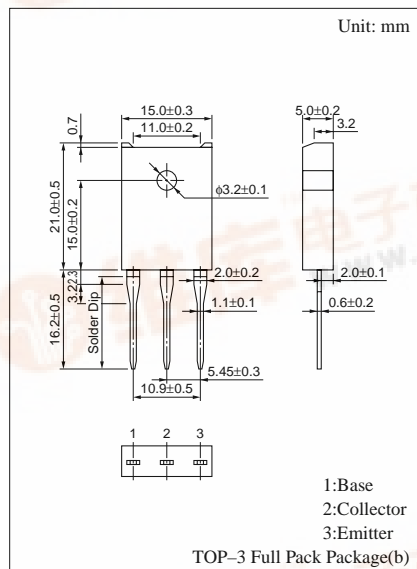
For horizontal deflection output

## Features

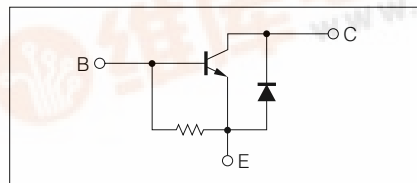
- Incorporating a built-in damper diode
- Reduction of a parts count and simplification of a circuit are allowed
- High breakdown voltage with high reliability
- High-speed switching
- Wide area of safe operation (ASO)
- Full-pack package which can be installed to the heat sink with one screw

## Absolute Maximum Ratings (T<sub>C</sub>=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V <sub>CB0</sub>	1500	V
Collector to emitter voltage	V <sub>CES</sub>	1500	V
Emitter to base voltage	V <sub>EBO</sub>	7	V
Peak collector current	I <sub>CP</sub>	20	A
Collector current	I <sub>C</sub>	5	A
Base current	I <sub>B</sub>	4	A
Collector power dissipation	P <sub>C</sub>	T <sub>C</sub> =25°C	100
		T <sub>a</sub> =25°C	3
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C



## Internal Connection



## Electrical Characteristics (T<sub>C</sub>=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 1000V, I <sub>E</sub> = 0			30	μA
		V <sub>CB</sub> = 1500V, I <sub>E</sub> = 0			300	μA
Emitter to base voltage	V <sub>EBO</sub>	I <sub>E</sub> = 500mA, I <sub>C</sub> = 0	7			V
Forward current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 5A	4.5		15	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 5A, I <sub>B</sub> = 1.2A			8	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 5A, I <sub>B</sub> = 1.2A			1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1A, f = 0.5MHz		2		MHz
Storage time (L-load)	t <sub>stg</sub>	I <sub>C</sub> = 5A, I <sub>B1</sub> = 1.2A, I <sub>B2</sub> = -1.2A,			12	μs
Fall time (L-load)	t <sub>f</sub>	L <sub>leak</sub> = 5μH			0.8	μs
Diode forward voltage	V <sub>F</sub>	I <sub>C</sub> = -6A, I <sub>B</sub> = 0			-2.3	V



