

NPN Triple Diffused Planar Silicon Darlington Transistor

2SD2049



Driver Applications

Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

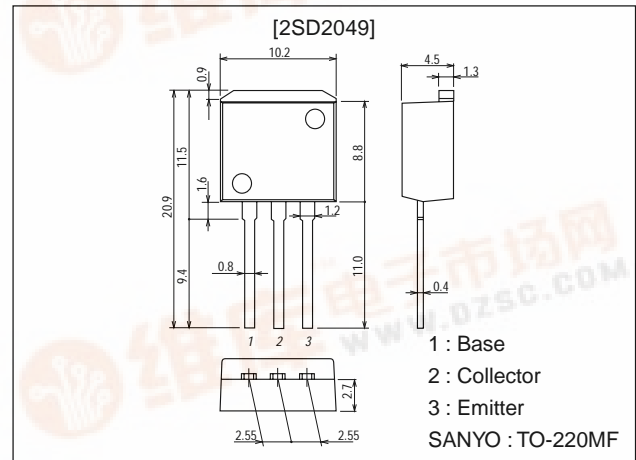
Features

- Suitable for sets whose height is restricted.
- High DC current gain.
- Large current capacity and wide ASO.

Package Dimensions

unit:mm

2049C



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		110	V
Collector-to-Emitter Voltage	V _{CEO}		100	V
Emitter-to-Base Voltage	V _{EBO}		6	V
Collector Current	I _C		5	A
Collector Current (Pulse)	I _{CP}		8	A
Collector Dissipation	P _C		1.65	W
		T _c =25°C	35	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =80V, I _E =0			0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			3.0	mA
DC Current Gain	h _{FE}	V _{CE} =3V, I _C =2.5A	1500	4000		
Gain-Bandwidth Product	f _T	V _{CE} =5V, I _C =2.5A		20		MHz
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =2.5A, I _B =5mA		0.9	1.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =2.5A, I _B =5mA			2.0	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =5mA, I _E =0	110			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =50mA, R _{BE} =∞	100			V

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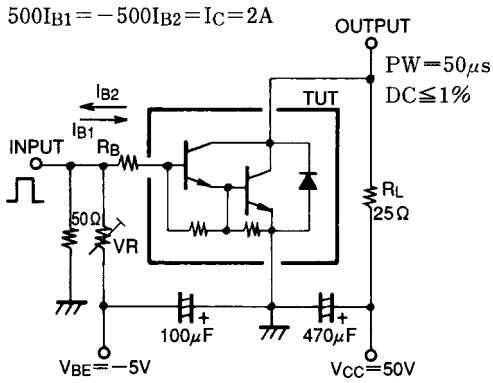
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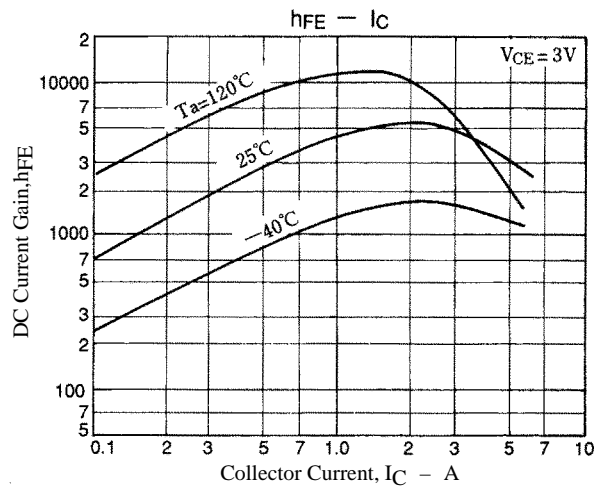
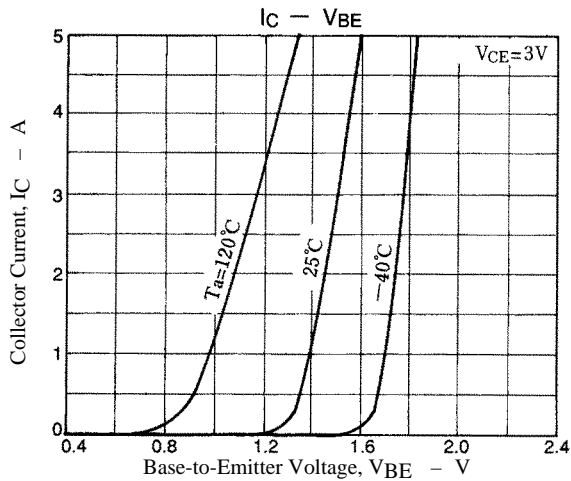
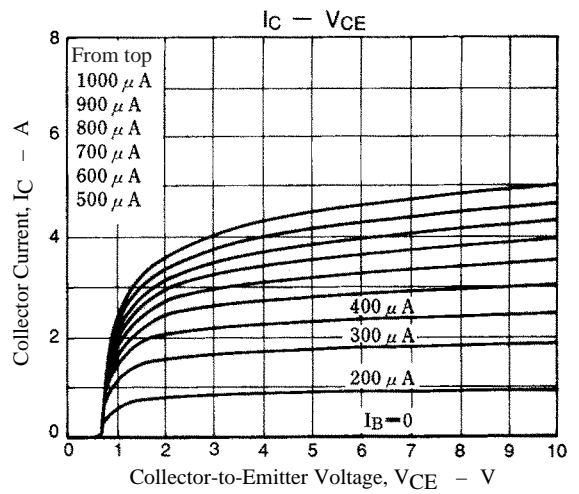
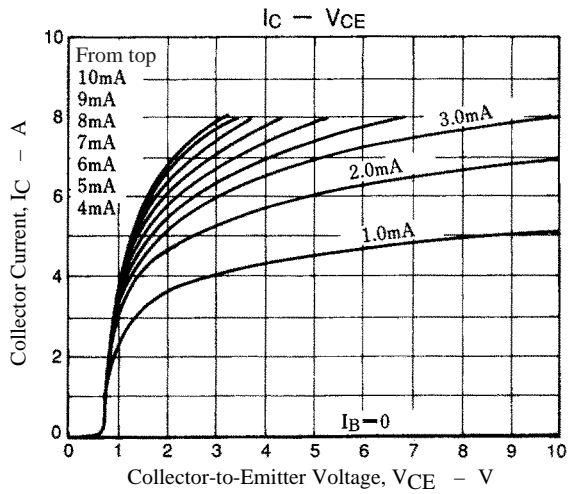
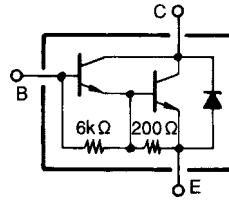
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	t_{on}	See specified test circuit.		0.6		μs
Storage Time	t_{stg}	See specified test circuit.		4.8		μs
Fall Time	t_f	See specified test circuit.		1.6		μs

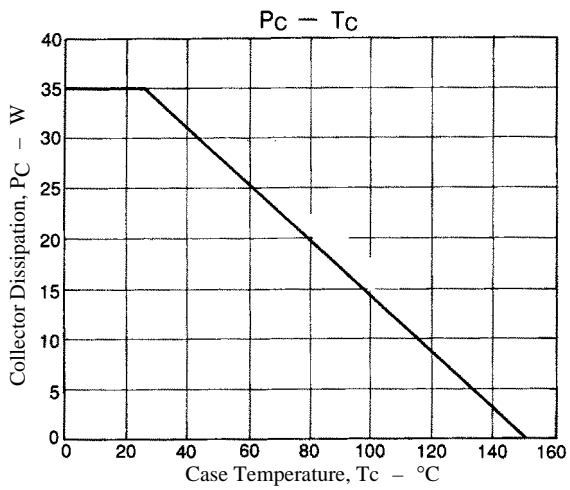
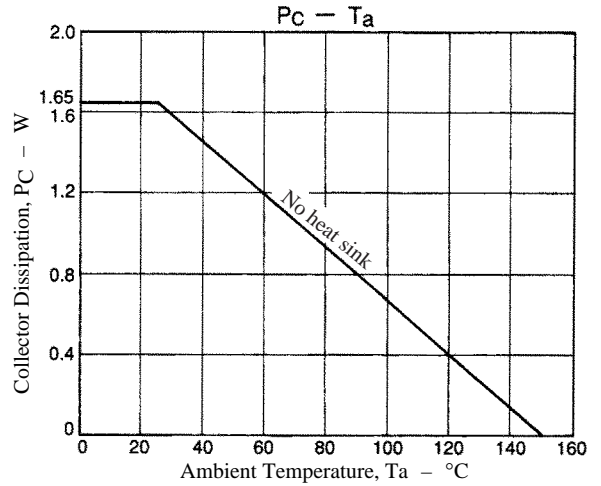
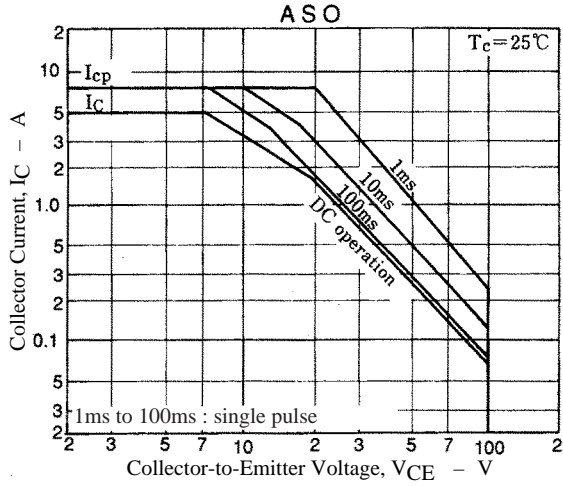
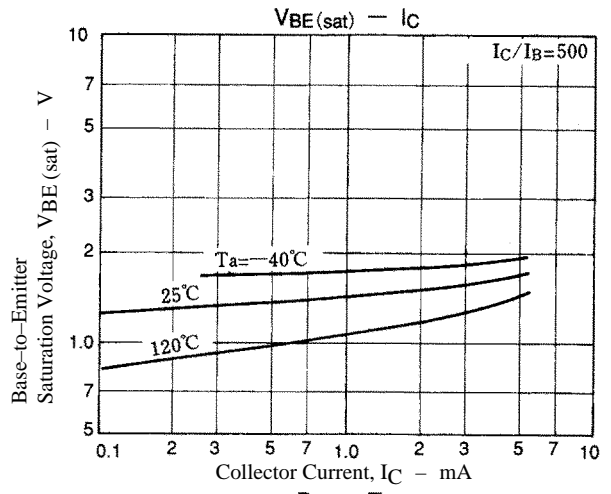
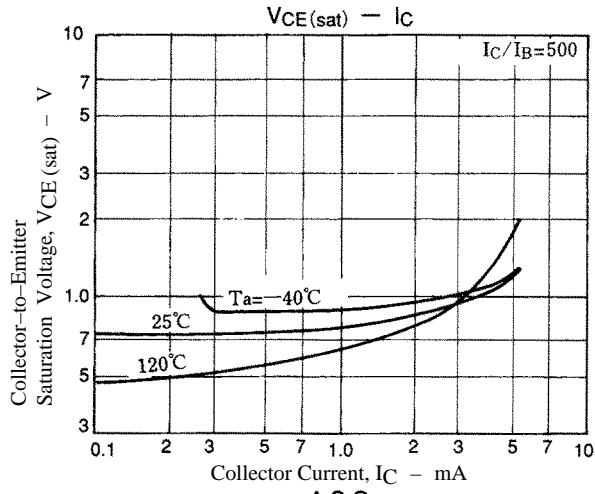
Switching Time Test Circuit



Electrical Connection



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