



2SD2712 — NPN Triple Diffused Planar Silicon Darlington Transistor

Driver Applications

Applications

- Suitable for use in control motor drivers, printer hammer drivers, relay drivers, audio output and constant-voltage regulators.

Features

- High DC current gain.
- Wide ASO.
- Low saturation voltage.
- Adoption of MBIT process.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CB0}		180	V
Collector-to-Emitter Voltage	V _{CEO}		160	V
Emitter-to-Base Voltage	V _{EBO}		6	V
Collector Current	I _C		10	A
Collector Current (Pulse)	I _{CP}		16	A
Collector Dissipation	P _C		2.5	W
		T _c =25°C	110	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} =180V, I _E =0A			0.1	mA
Emitter Cutoff Current	I _{EBO}	V _{EB} =6V, I _C =0A			10	mA
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =6.5A	5000			
Gain-Bandwidth Product	f _T	V _{CE} =5V, I _C =6.5A		15		MHz
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =5.5A, I _B =11mA			1.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =5.5A, I _B =11mA			2.3	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =1mA, I _E =0A	180			V
Collector Sustain Voltage	V _{CEO(SUS)}	I _C =100mA, I _B =0A	160			V

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2SD2712

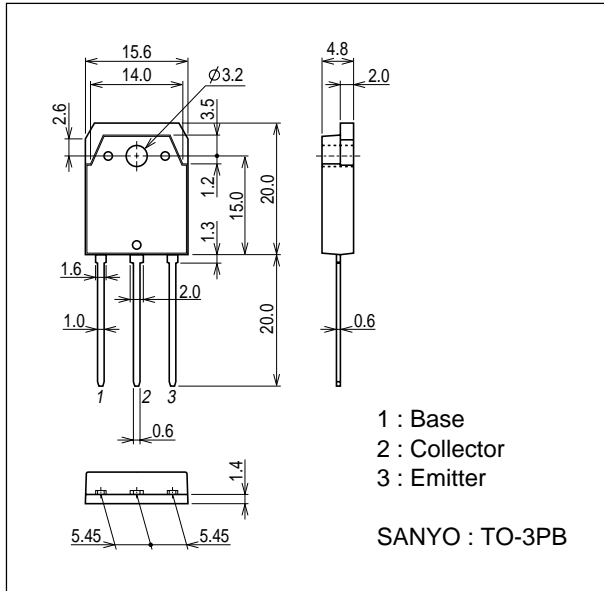
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	t_{on}	See specified Test Circuit.		0.9		μs
Storage Time	t_{stg}	See specified Test Circuit.		8.0		μs
Fall Time	t_f	See specified Test Circuit.		3.0		μs

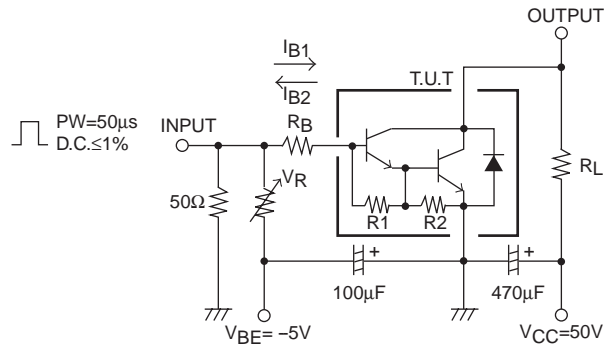
Package Dimensions

unit : mm

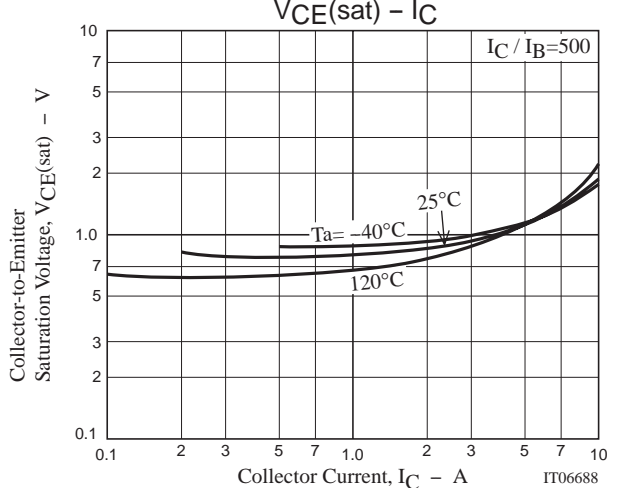
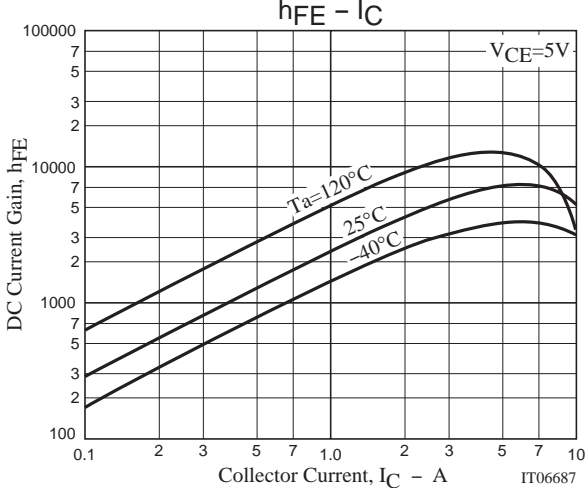
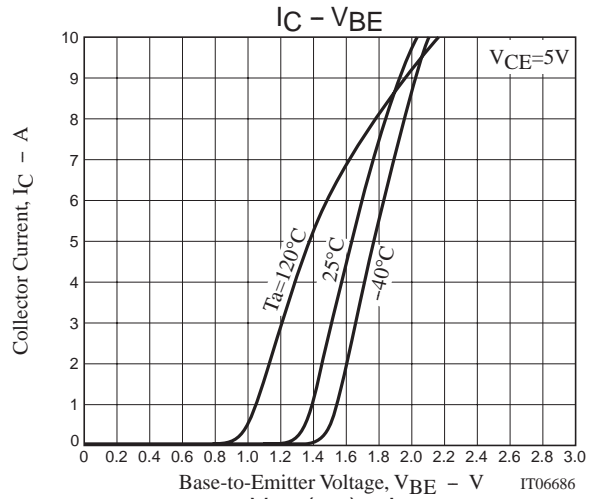
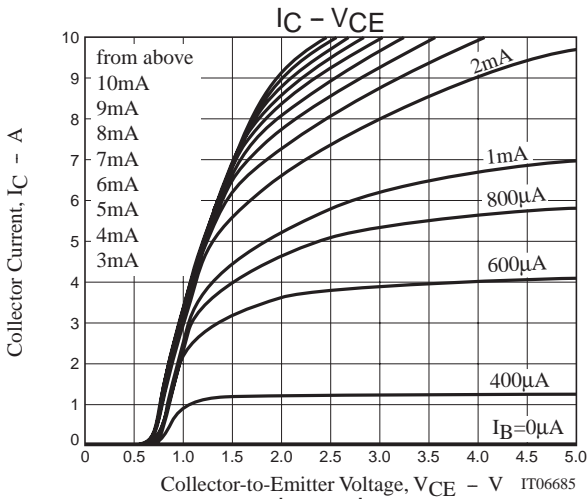
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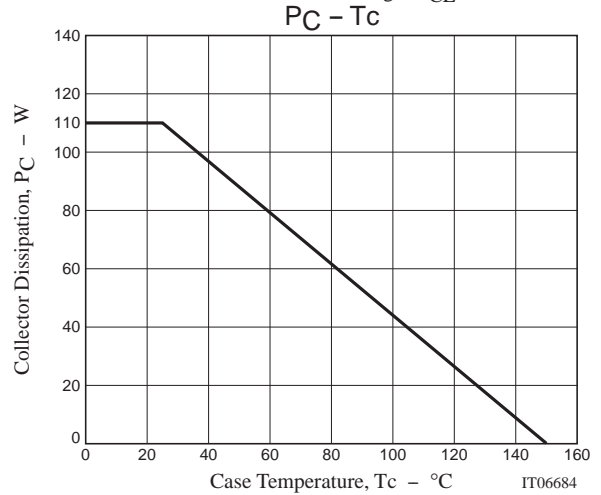
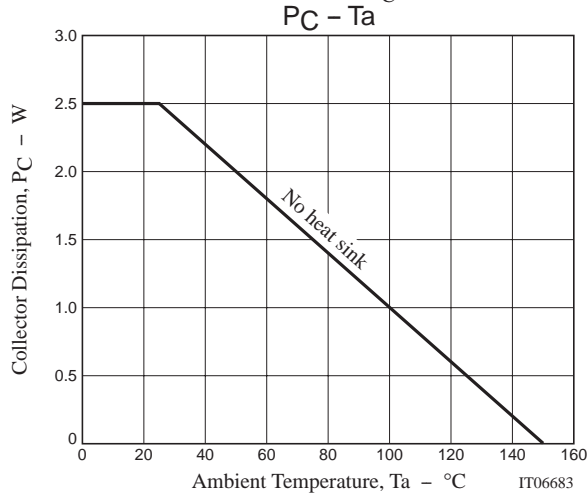
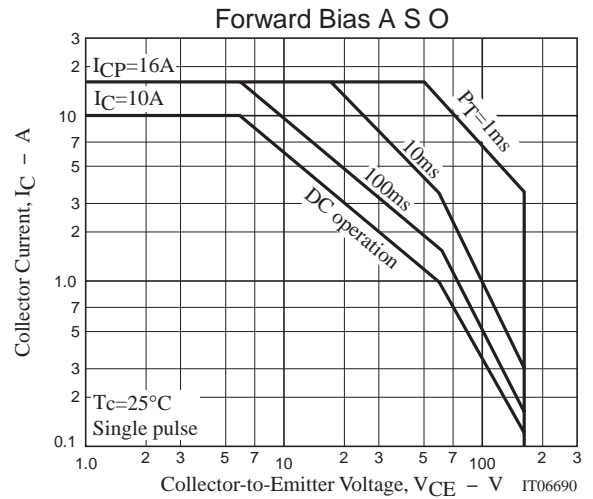
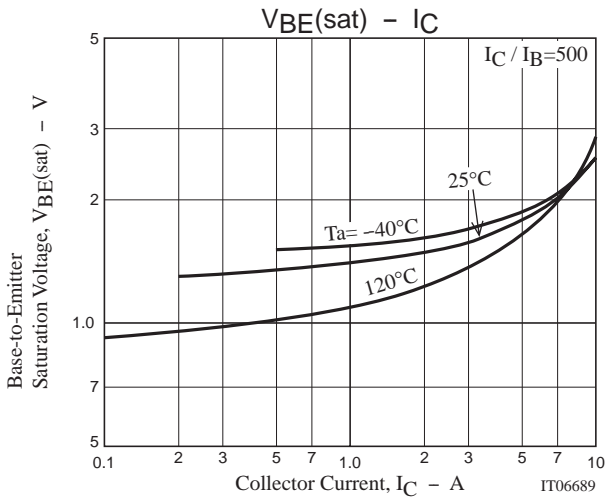


Switching Time Test Circuit



$$I_C = 500I_{B1} = 500I_{B2} = 6.5A$$





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