NPN Epitaxial Planar Silicon Transistor



2SD1145

High-Current Driver Applications

Applications

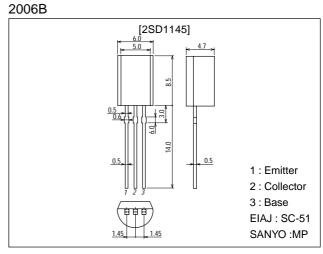
• Relay drivers, hammer drivers, lamp drivers, strobe DC-DC converters, motor drivers.

Features

- · Low saturation voltage.
- · Large current capacity and wide ASO.

Package Dimensions

unit:mm



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit		
Collector-to-Base Voltage	V _{CBO}		60	V		
Collector-to-Emitter Voltage	VCEO		20	V		
Emitter-to-Base Voltage	VEBO		6	V		
Collector Current	ι _C		5	A		
Collector Current (Pulse)	I _{CP}	100ms, single pulse	8	A		
Collector Dissipation	PC		0.9	W		
Junction Temperature	Tj		150	°C		
Storage Temperature	Tstg		-55 to +150	°C		

Electrical Characteristics at Ta = 25°C

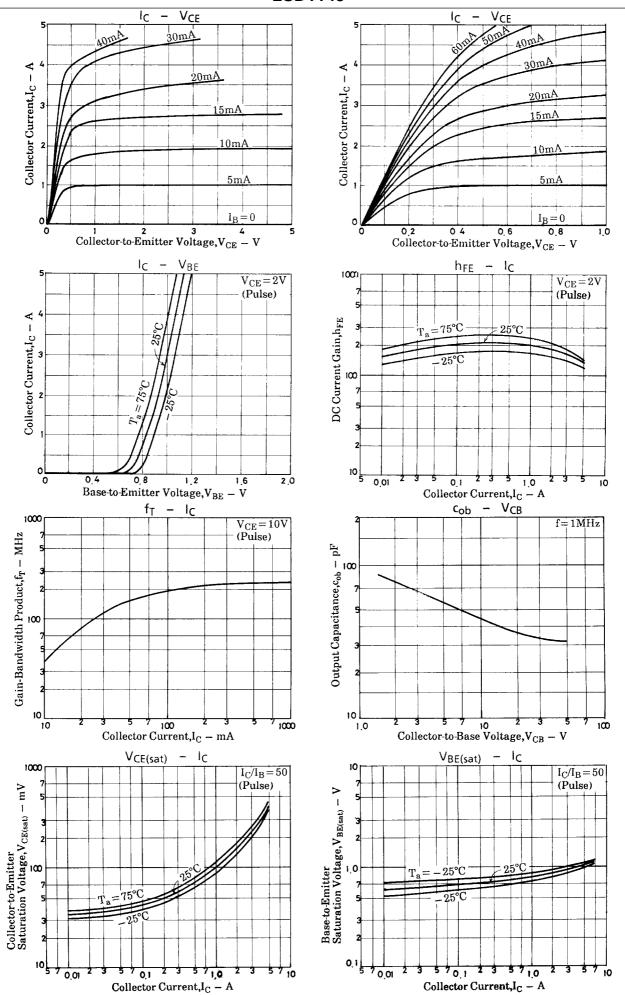
Parameter	Symbol	Conditions		Ratings		
			min	typ	max	Unit
Collector Cutoff Current	ICBO	V _{CB} =50V, I _E =0			1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0			1.0	μA
DC Current Gain	h _{FE} 1	V _{CE} =2V, I _C =0.5A	100*		560*	
	h _{FE} 2	V _{CE} =2V, I _C =3A (Pulse)	75			
Gain-Bandwidth Product	fT	V _{CE} =10V, I _C =50mA		120		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		45		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =3A, I _B =60mA (Pulse)			0.5	V
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =3A, I _B =60mA (Pulse)			1.5	V

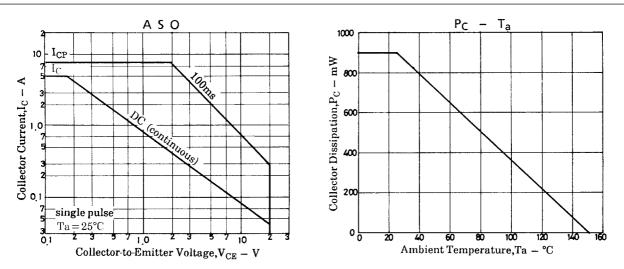
* : The 2SD1145 is classified by 0.5A h_{FE} as follows : 100 E 200 160 F 320 280 G 560

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