

**2SD2324**

Compact Motor Driver Applications

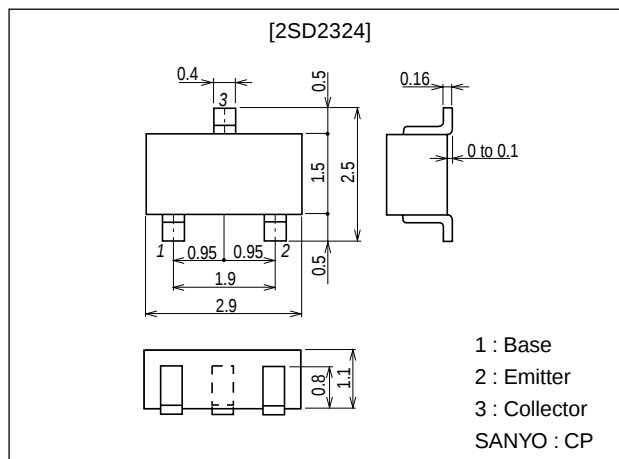
Features

- Low saturation voltage.
- Contains a diode between collector and emitter.
- Contains a bias resistor between base and emitter.
- Large current capacity.
- Small-sized package facilitating the realization of high-density, small-sized hybrid ICs.

Package Dimensions

unit:mm

2018B



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		20	V
Collector-to-Emitter Voltage	V_{CEO}		15	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		0.8	A
Collector Current (Pulse)	I_{CP}		2	A
Collector Dissipation	P_C		200	mW
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_{CBO}	$V_{CB}=15V, I_E=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=2V, I_C=0.5A$	70			
Gain-Bandwidth Product	f_T	$V_{CE}=2V, I_C=0.5A$		150		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		15		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=10mA$		0.16	0.3	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=10mA$		0.85	1.2	V

Marking : BN

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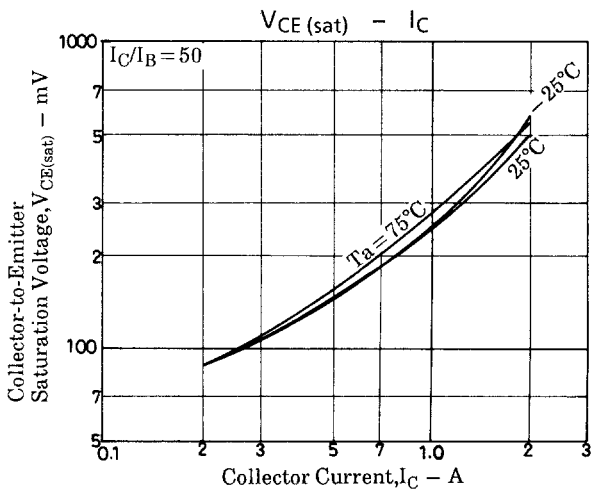
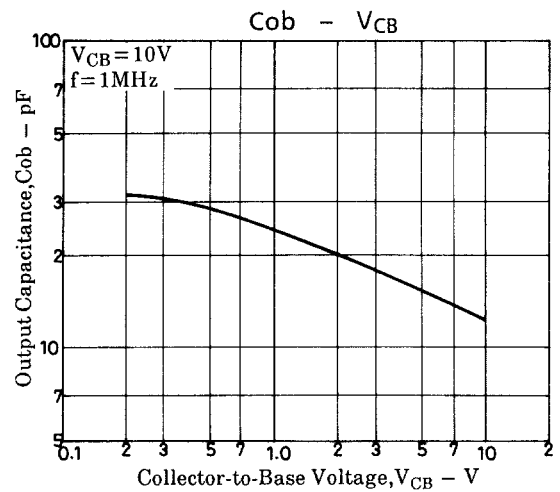
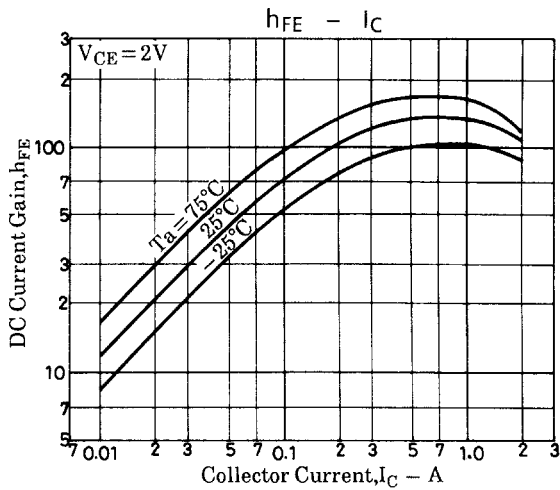
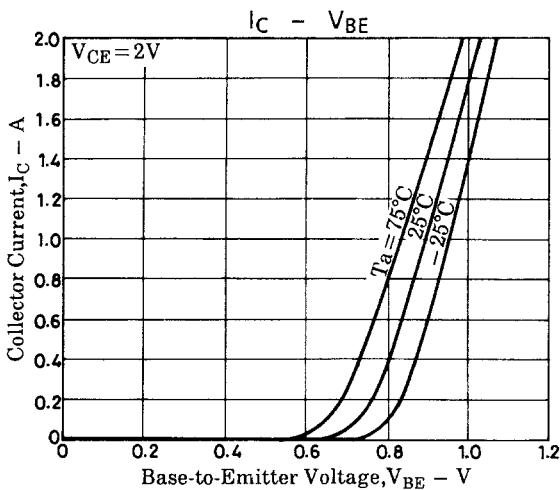
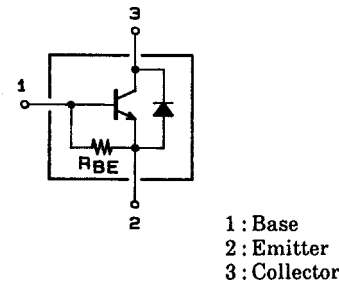
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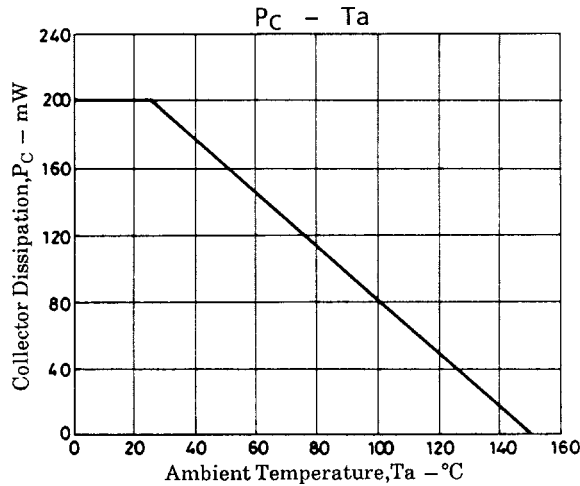
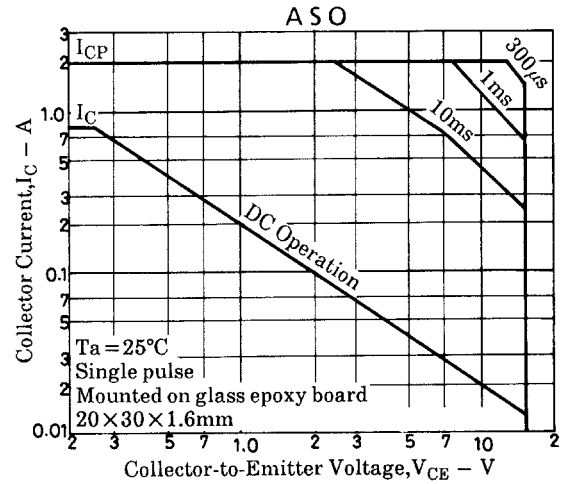
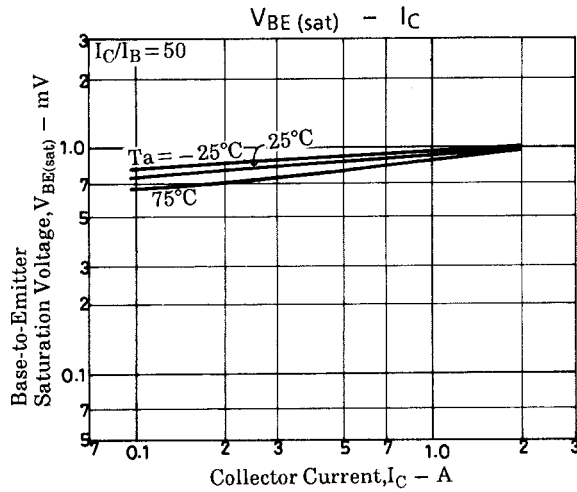
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO1}$	$I_C=10\mu A, R_{BE}=\infty$	20			V
	$V_{(BR)CEO2}$	$I_C=10mA, R_{BE}=\infty$	15			V
Diode Forward Voltage	V_F	$I_F=0.5A$			1.5	V
Base-to-Emitter Resistance	R_{BE}			1.0		k Ω

Electrical Connection





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