

**2SD2324**

## Compact Motor Driver Applications

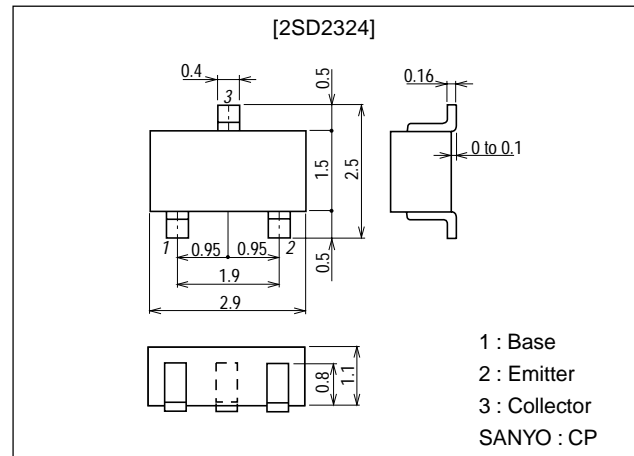
### Features

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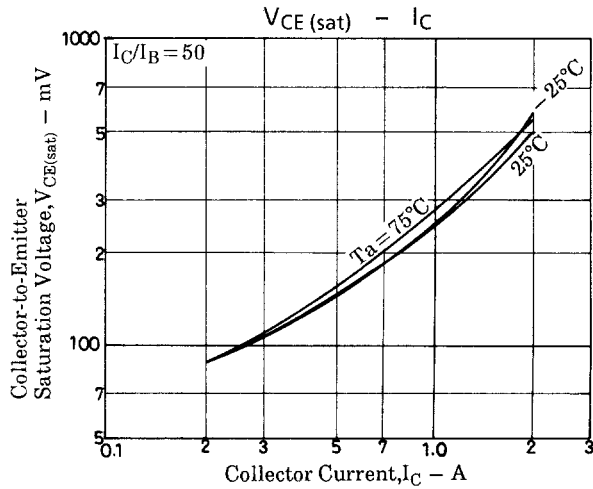
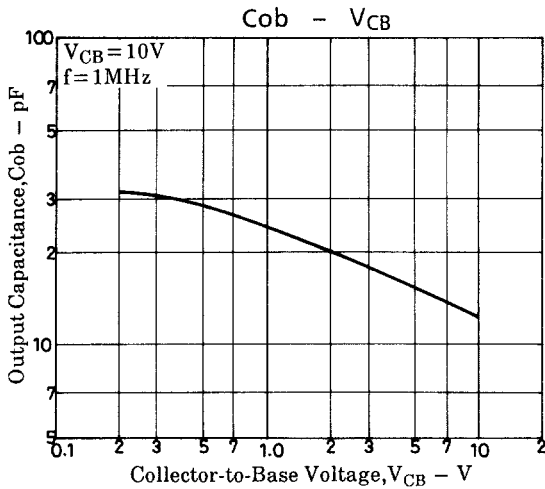
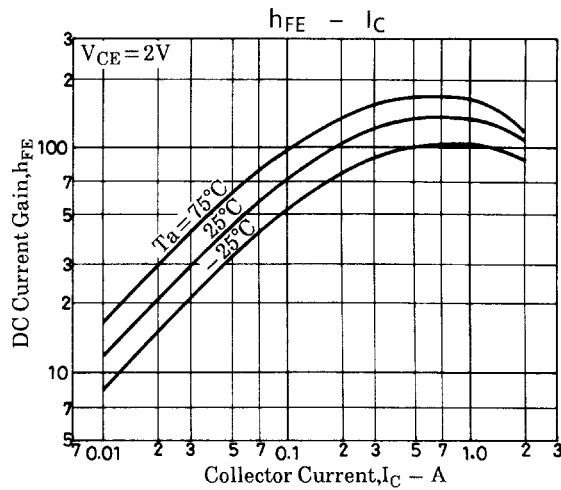
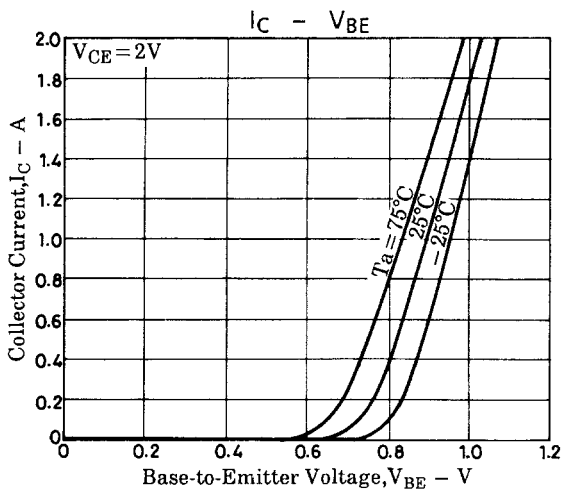
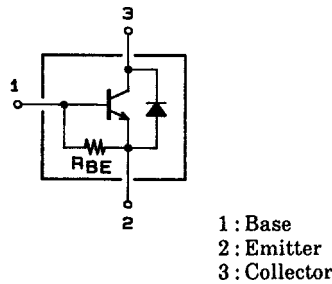
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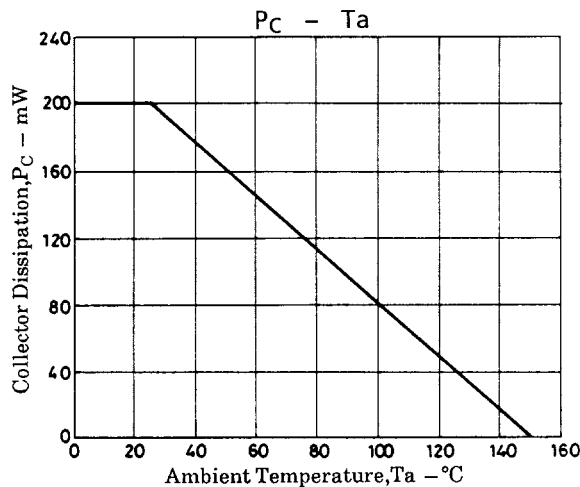
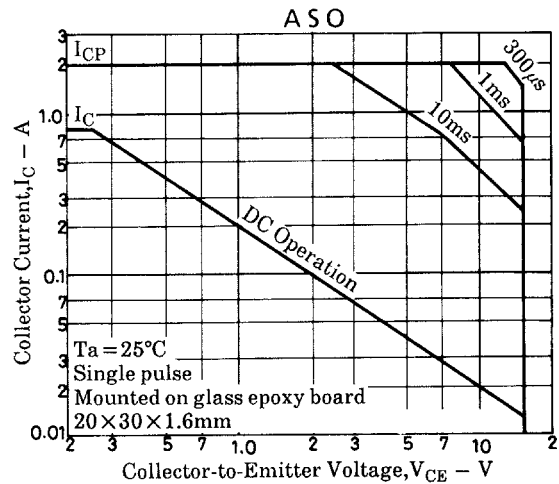
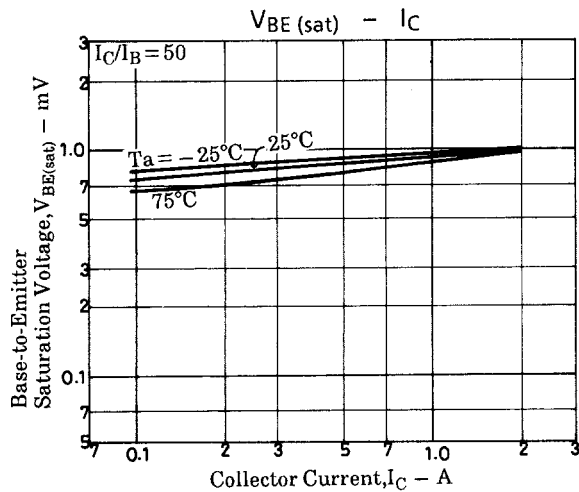
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO1}$	$I_C=10\mu A, R_{BE}=\infty$	20			V
	$V_{(BR)CEO2}$	$I_C=10mA,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

Electrical Connection





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