



Compact Motor Driver Applications

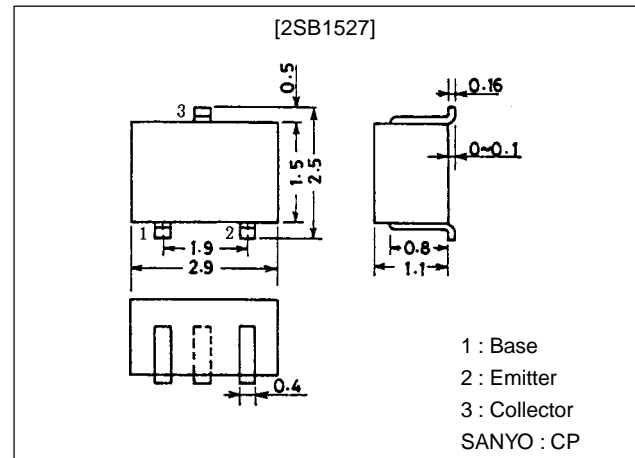
Features

- Low saturation voltage.
- Contains a diode between collector and emitter.
- Contains a bias resistor between base and emitter.
- Large current capacity.
- Compact package making it easy to realize 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	$V_{CE}=-2V, I_C=-0.5A$		250		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		30		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500mA, I_B=-10mA$	-0.2	-0.4		V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-500mA, I_B=-10mA$	-0.95	-1.3		V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-10mA, R_{BE}=\infty$	-15			V

Marking : NS

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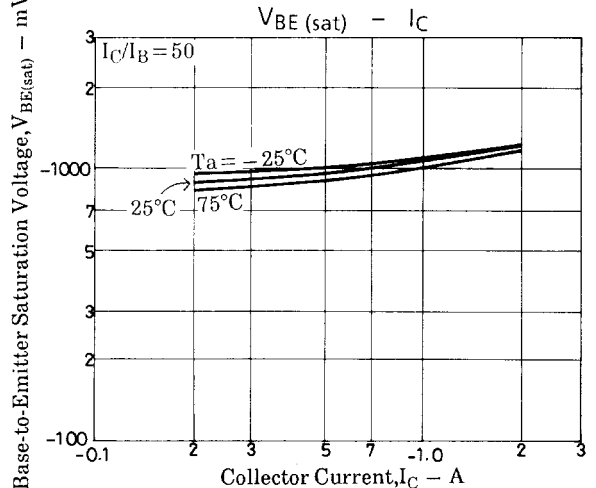
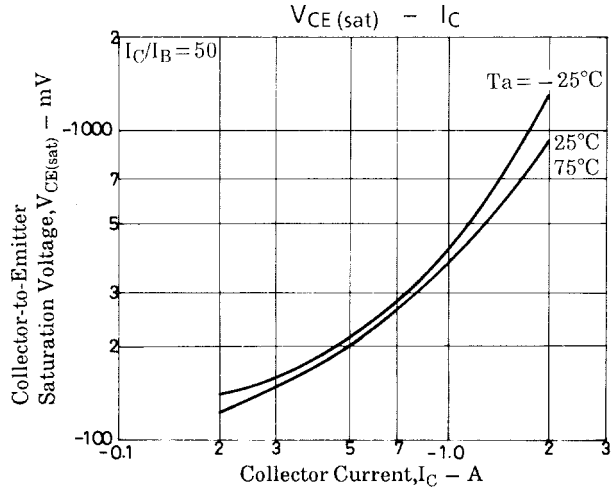
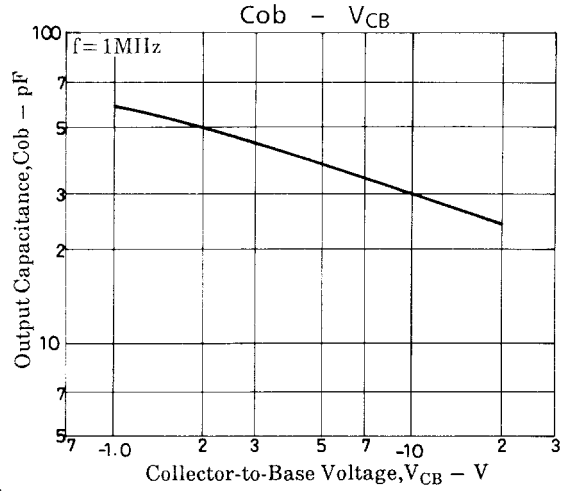
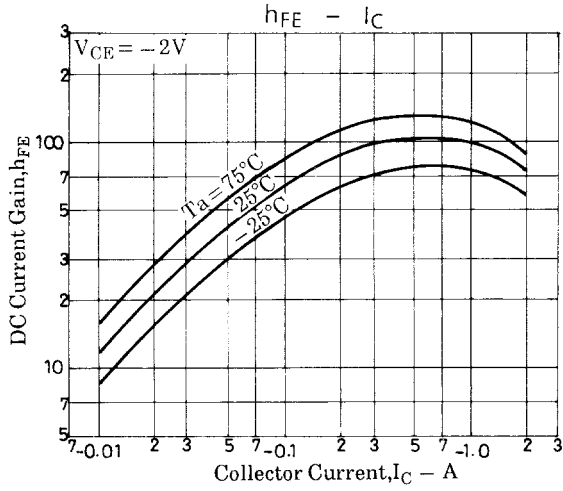
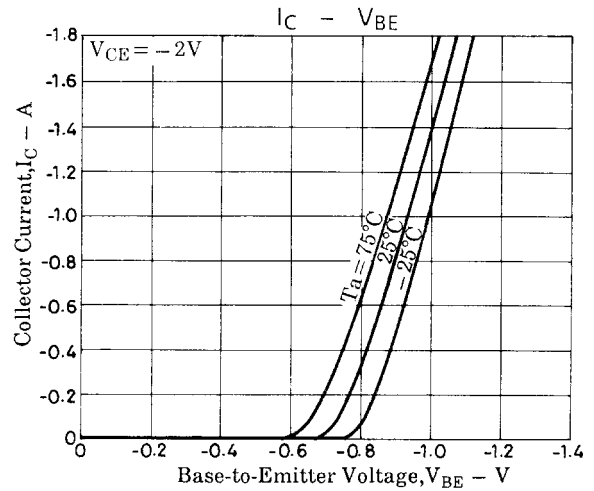
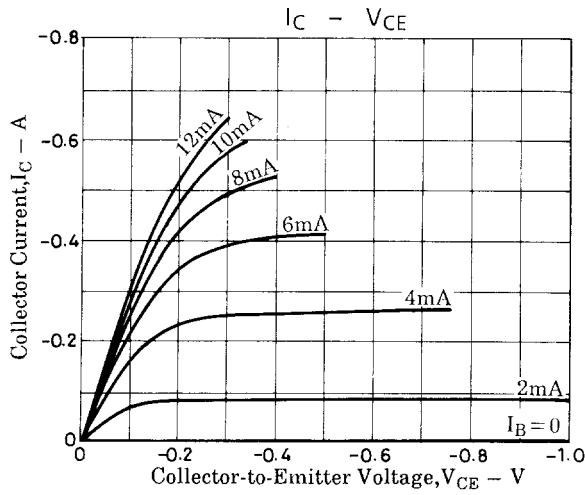
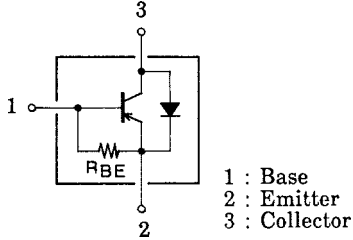
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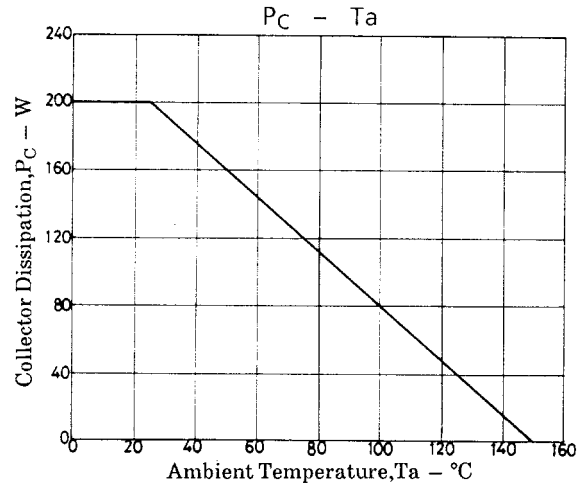
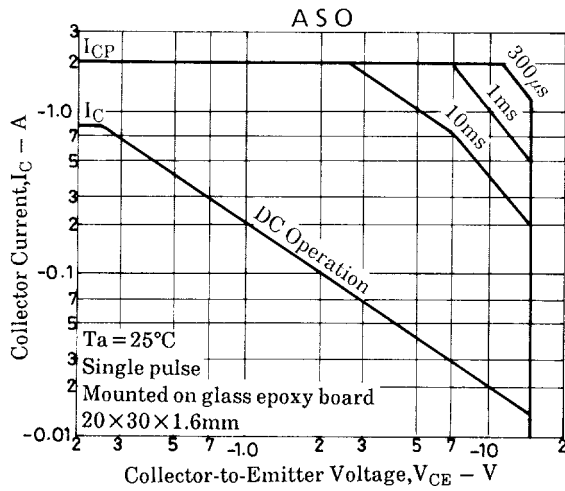
2SB1527

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Diode Forward Voltage	V_F	$I_F = -0.5A$			-1.5	V
Base-to-Emitter Resistance	R_{BE}			1.0		k Ω

Electrical Connection



2SB1527



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