

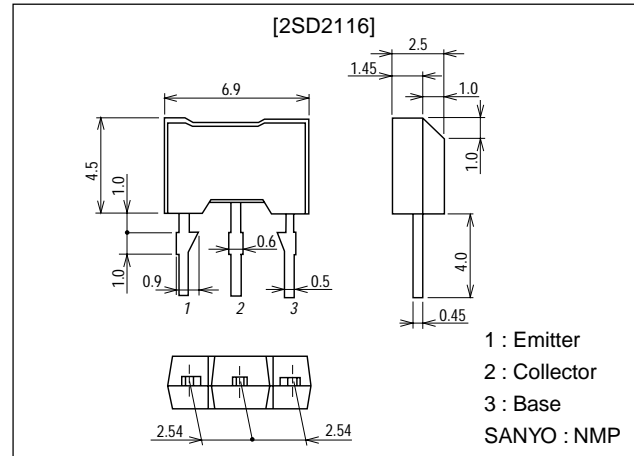
**2SD2116****General Driver Applications****Features**

- Darlington connection.
- High DC current gain.
- Large current capacity, wide ASO.

**Package Dimensions**

unit:mm

2064A

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		80	V
Collector-to-Emitter Voltage	$V_{CEO}$		50	V
Emitter-to-Base Voltage	$V_{EBO}$		10	V
Collector Current	$I_C$		0.7	A
Collector Current (Pulse)	$I_{CP}$		2	A
Collector Dissipation	$P_C$		1	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	$I_{CBO}$	$V_{CB}=40V, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=8V, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2V, I_C=50mA$	5000			
	$h_{FE2}$	$V_{CE}=2V, I_C=500mA$	4000			
Gain-Bandwidth Product	$f_T$	$V_{CE}=5V, I_C=50mA$		200		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		9		pF

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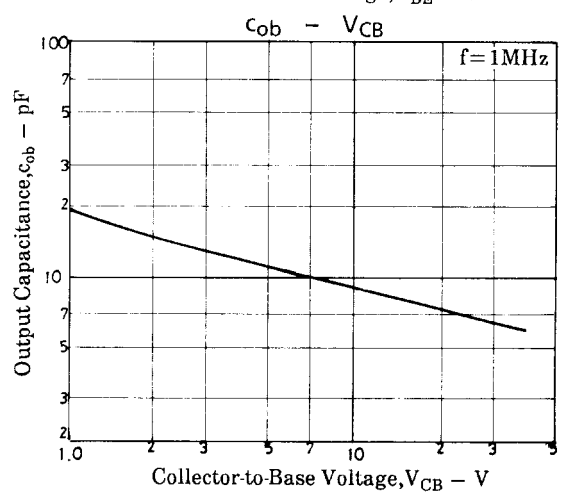
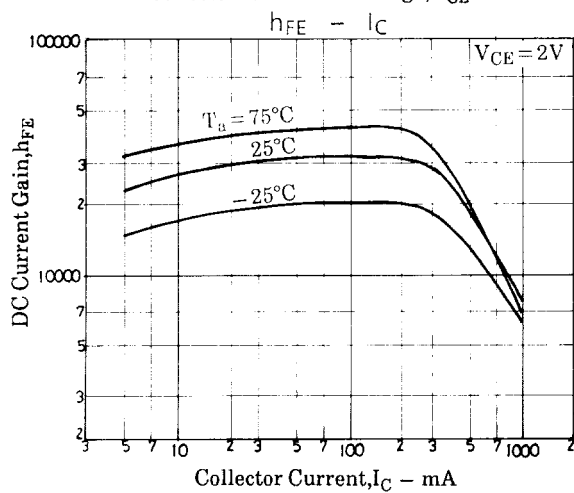
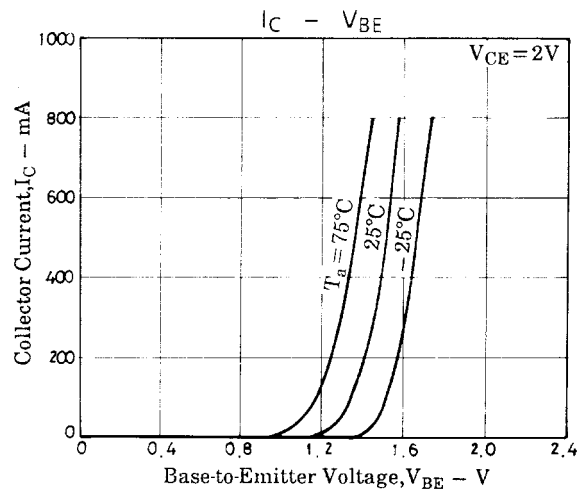
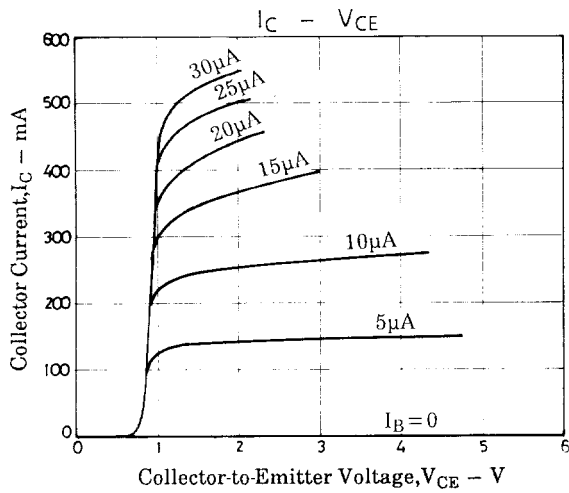
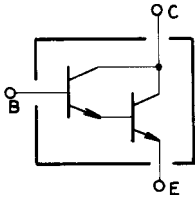
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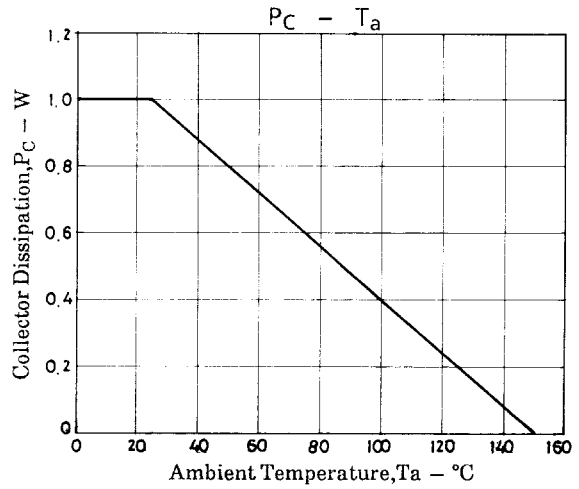
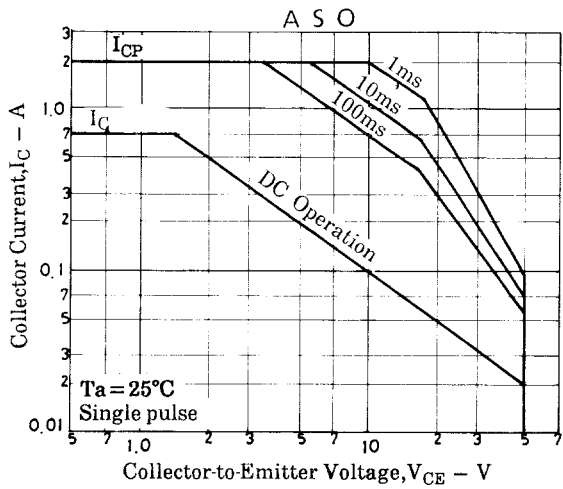
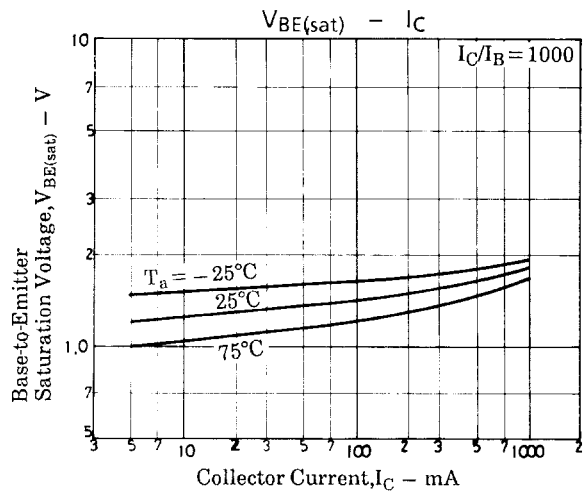
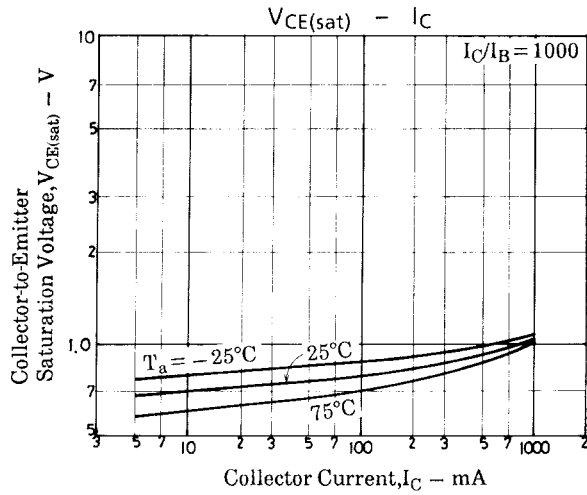
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=0.1mA$		0.8	1.2	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=0.1mA$		1.4	2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	10			V

## Electrical Connection



## 2SD2116



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