

**2SC4491**

L Load (Various Drivers) Switching Applications

Applications

- Suitable for use in switching of L load (motor drivers, printer hammer drivers, relay drivers).

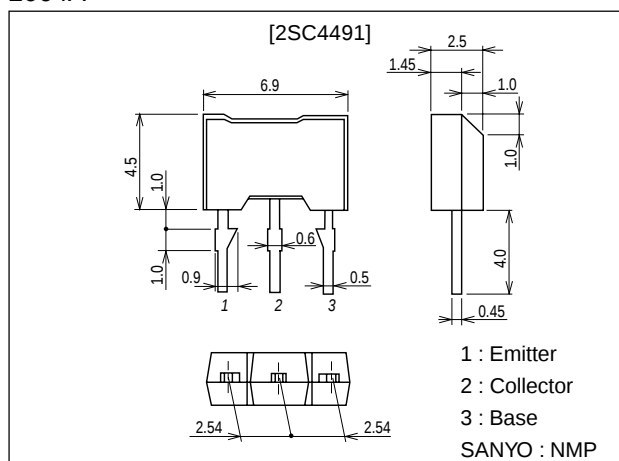
Features

- Darlington connection.
- On-chip Zener diode of $60\pm 10\text{V}$ between collector and base.
- Uniformity in collector-to-base voltage.
- High DC current gain.
- Wide ASO.
- Large inductive load handling capability.

Package Dimensions

unit:mm

2064A



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		50*	V
Collector-to-Emitter Voltage	V_{CEO}		50*	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		1.2	A
Collector Current (Pulse)	I_{CP}		2.5	A
Collector Dissipation	P_C		1	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

* : On-chip Zener diode ($60\pm 10\text{V}$)

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			10	μA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}, I_C=500\text{mA}$	1000	5000		
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=2\text{mA}$		1.0	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=2\text{mA}$			2.0	V
Inductiv Load Handling Capability	Es/b	$L=100\text{mH}, R_{BE}=100\Omega$	15			mJ

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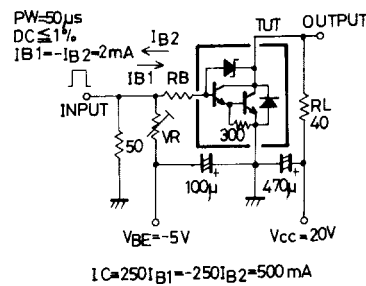
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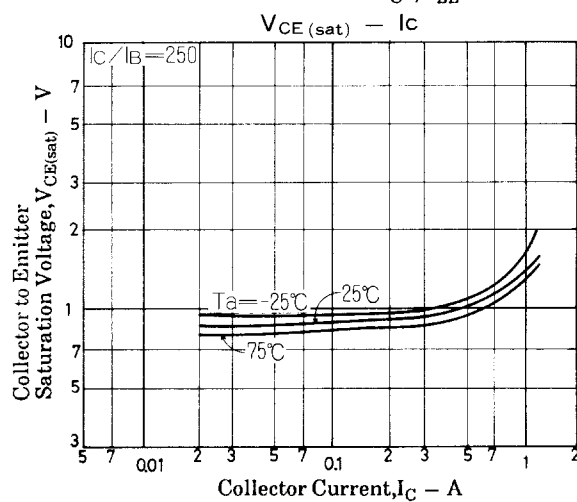
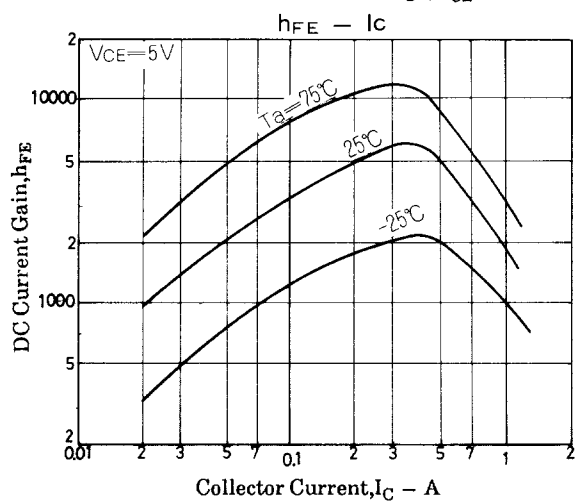
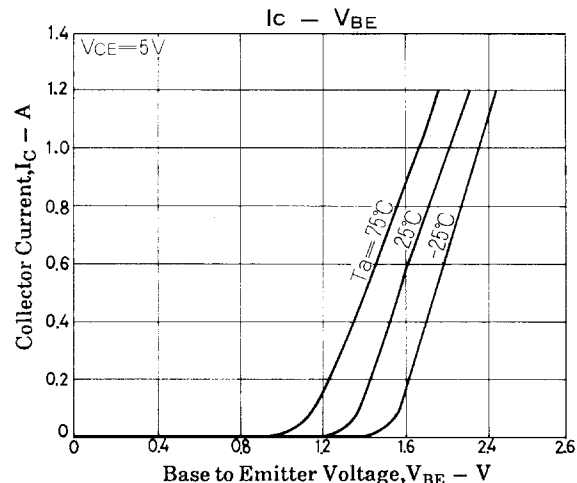
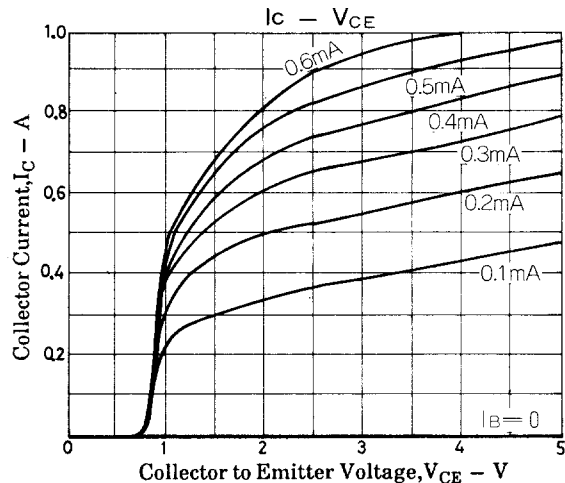
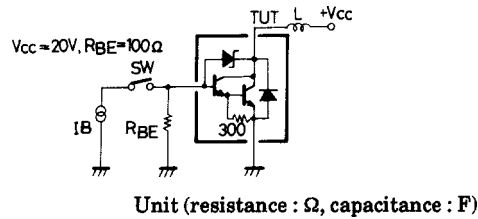
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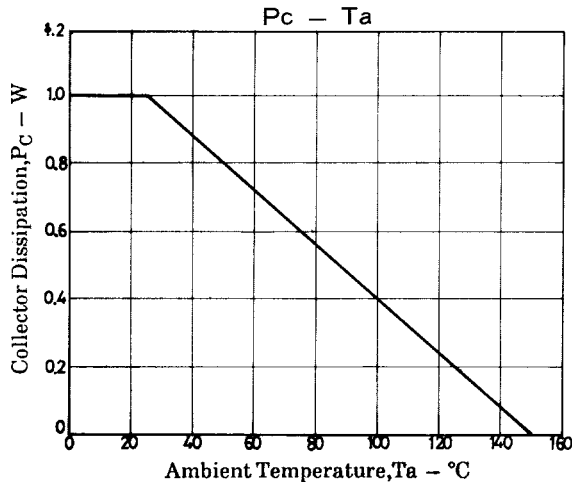
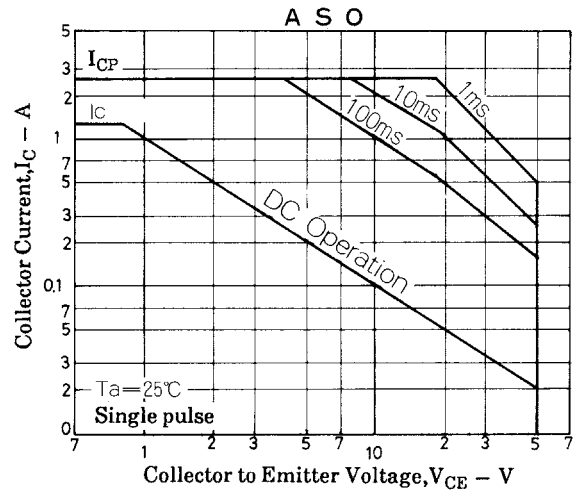
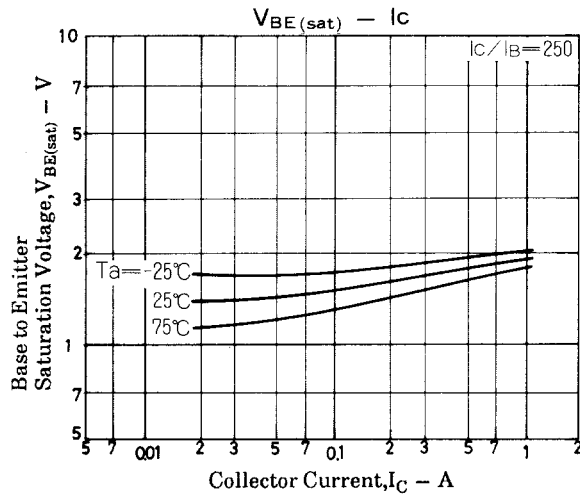
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50	60	70	V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50	60	70	V
Turn-on Time	t_{on}	See specified Test Circuit.		0.2		μs
Storage Time	t_{stg}	See specified Test Circuit.		2.2		μs
Fall Time	t_f	See specified Test Circuit.		0.4		μs

Switching Time Test Circuit



Es/b Test Circuit





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