

**2SC3292****For General-Purpose Drivers****Applications**

- Especially suited for use in switching of L load motor driver, printer hammer driver, relay driver, etc.

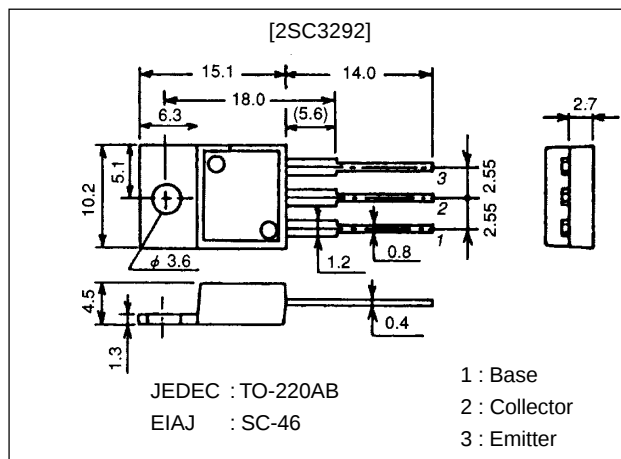
Features

- High DC current gain.
- Large current capacity and wide ASO.
- Contains $60\pm 10\text{V}$ Zener diode between collector and base.
- Uniformity in collector-to-base breakdown voltage due to adoption of accurate impurity diffusion process.
- 15mJ reverse energy rating.

Package Dimensions

unit:mm

2010C

**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
Base Current	I_B		0.25	A
Collector Dissipation	P_C	$T_c=25^\circ\text{C}$	20	W
Junction Temperature	T_J		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

* : Built-in 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}	$V_{EB}=5\text{V}, I_C=0$			2	mA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}, I_C=0.5\text{A}$	1000	4000		
Gain-Bandwidth Product	f_T	$V_{CE}=5\text{V}, I_C=0.5\text{A}$		180		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.5\text{A}, I_B=2\text{mA}$		1.0	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=0.5\text{A}, I_B=2\text{mA}$			2.0	V

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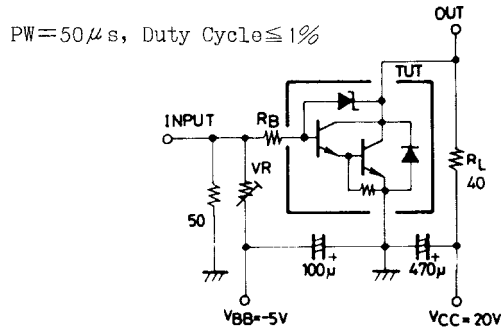
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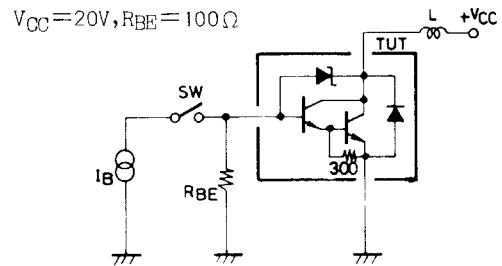
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	50	60	70	V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	50	60	70	V
Unclamped inductive load enaegy	Es/b	$L=100mH, R_{BE}=100\Omega$	15			mJ
Turn-ON Time	t_{on}	$V_{CC}=20V, I_C=0.5A, I_{B1}=-I_{B2}=2mA$		0.2		μs
Storage Time	t_{stg}	$V_{CC}=20V, I_C=0.5A, I_{B1}=-I_{B2}=2mA$		2.2		μs
Fall Time	t_f	$V_{CC}=20V, I_C=0.5A, I_{B1}=-I_{B2}=2mA$		0.4		μs

Switching Time Test Circuit

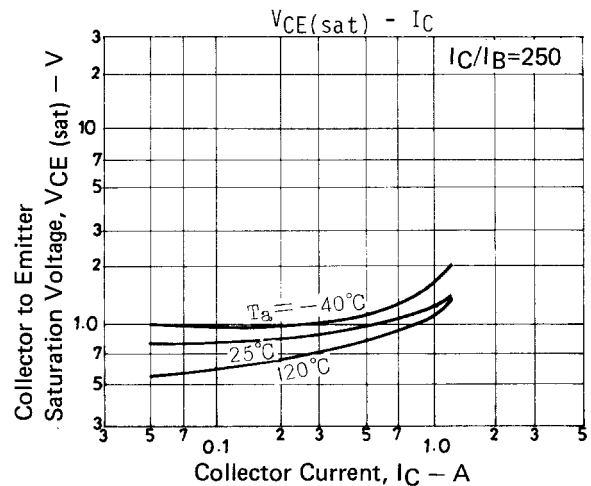
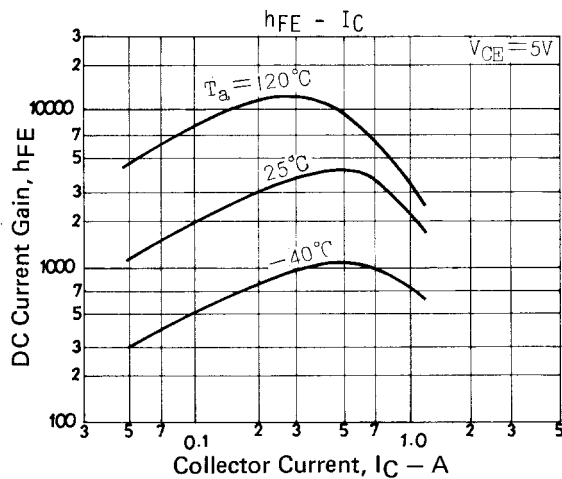
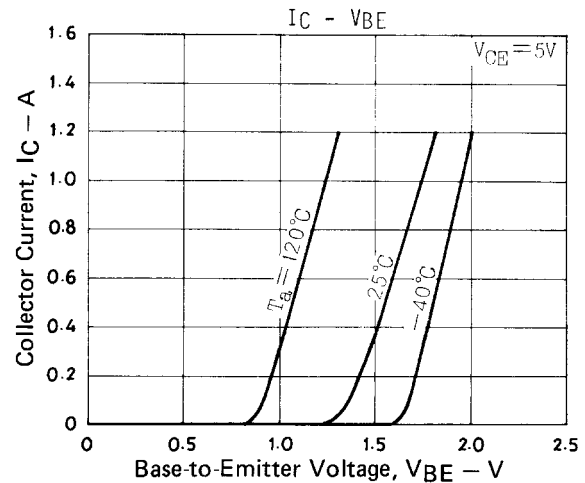
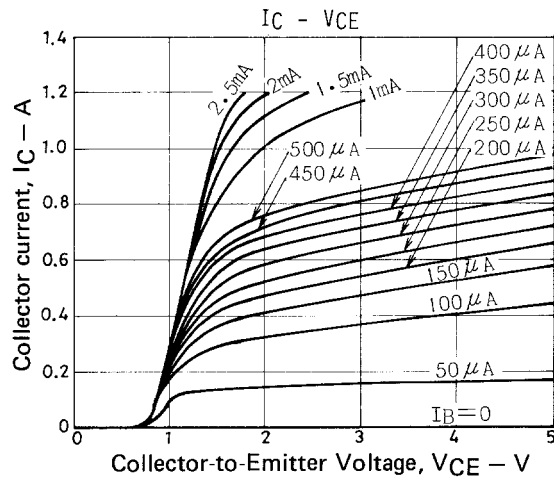


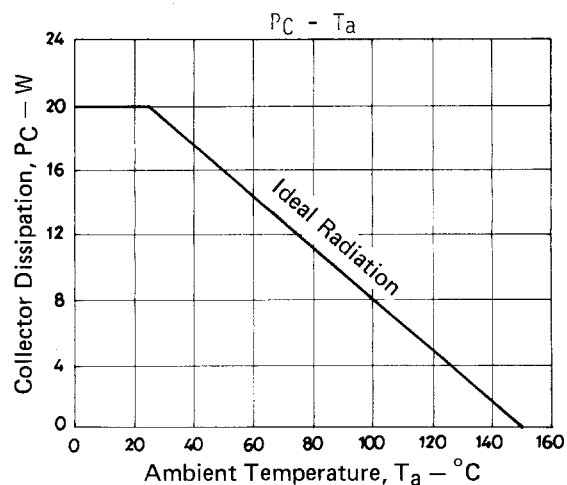
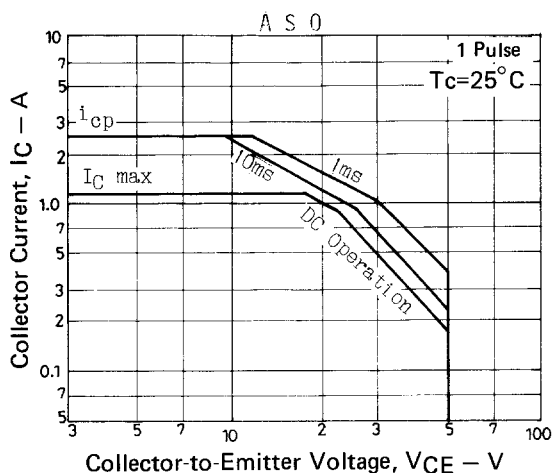
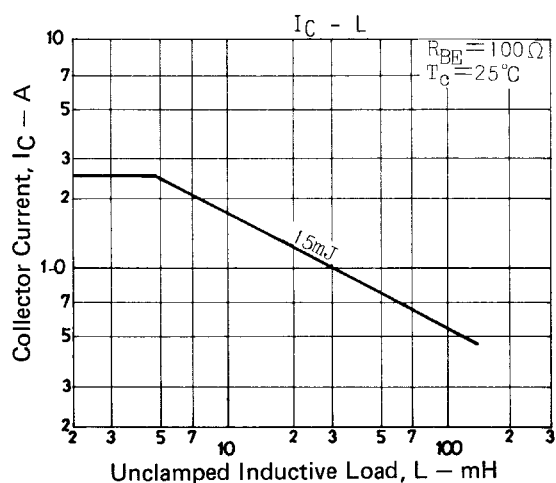
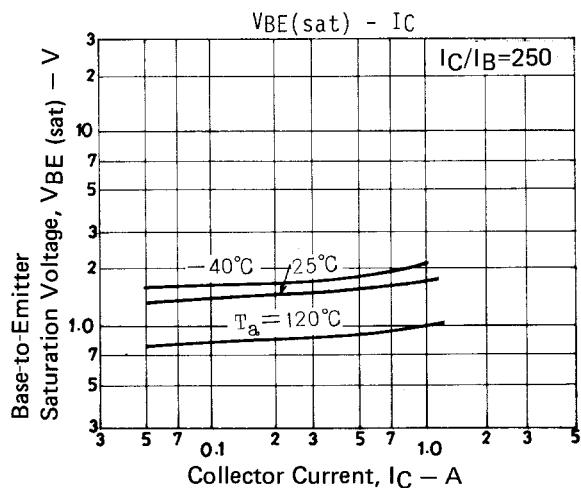
Unit (resistance: Ω , capacitance: F)

Es/b Test Circuit



Unit (resistance: Ω)





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