

**SANYO**

No.1221C

**2SD1395**

NPN Triple Diffused Planar Silicon Darlington Transistor.

**Driver Applications****Applications**

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

**Features**

- High DC current gain.
- Large current capacity.
- Wide ASO.
- On-chip Zener diode of  $60 \pm 10V$  between collector and base.
- Uniformity in collector-to-base breakdown voltage due to adoption of accurate impurity diffusion process.
- High inductive load handling capability.

**Absolute Maximum Ratings at  $T_a = 25^\circ C$** 

			unit
Collector-to-Base Voltage	$V_{CB0}$	50※	V
Collector-to-Emitter Voltage	$V_{CEO}$	50※	V
Emitter-to-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	5	A
Collector Current (Pulse)	$I_{CP}$	8	A
Base Current	$I_B$	0.5	A
Collector Dissipation	$P_C$	40	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ C$

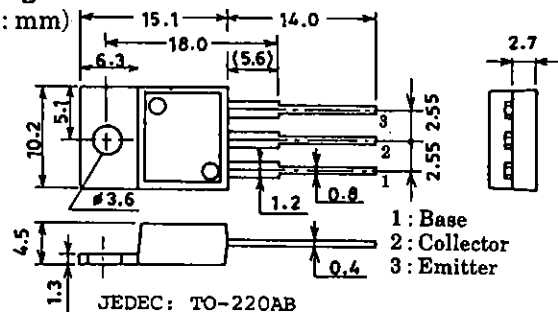
※ : With Zener diode ( $60 \pm 10V$ )

**Electrical Characteristics at  $T_a = 25^\circ C$** 

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 40V, I_E = 0$			100	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			3	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 3V, I_C = 2.5A$	1000	4000		
Gain-Bandwidth Product	$f_T$	$V_{CE} = 5V, I_C = 2.5A$		20		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5A, I_B = 5mA$		0.9	1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5A, I_B = 5mA$			2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5mA, I_E = 0$	50	60	70	V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50mA, R_{BE} = \infty$	50	60	70	V
Inductive Load Handling Capability	$E_s/b$	$L = 100mH, R_{BE} = 100\Omega$	50			mJ
Rise Time	$t_{on}$	$V_{CC} = 20V, I_C = 3.0A$ $I_{B1} = -I_{B2} = 6mA$		0.6		$\mu s$
Storage Time	$t_{stg}$			4.0		$\mu s$
Fall Time	$t_f$			1.5		$\mu s$

**Package Dimensions 2010C**

(unit : mm)

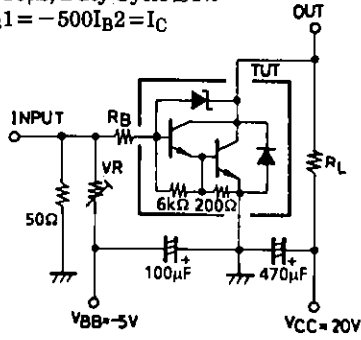
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91096TS (KOTO) 8-5330/D251MH/5257KI/7223KI, MT No.1221-1/3

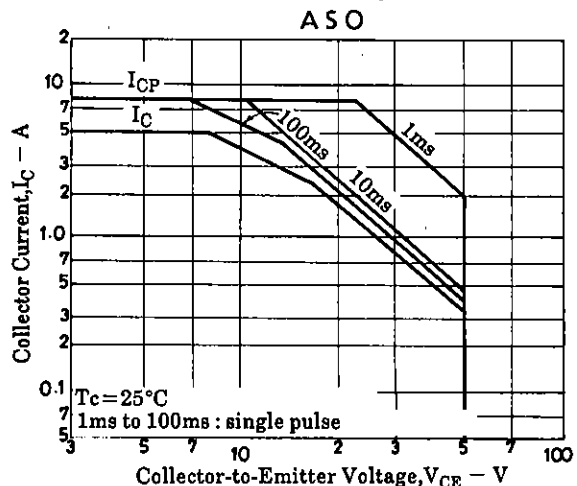
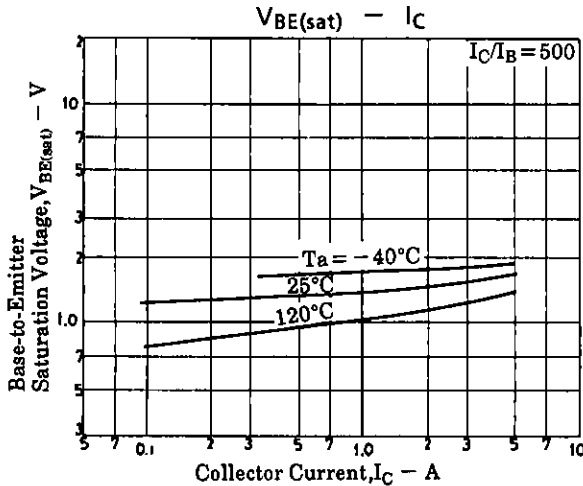
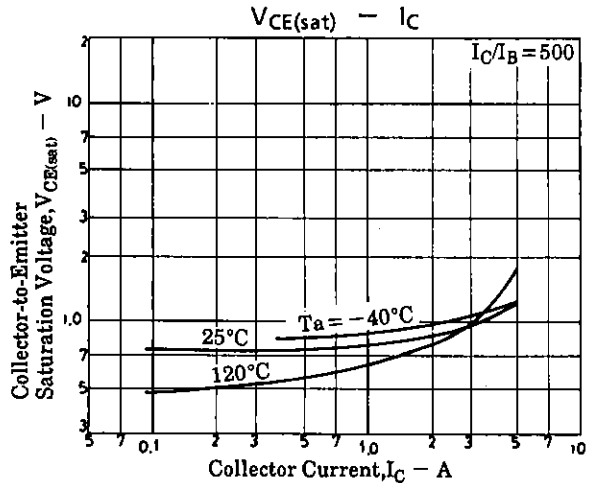
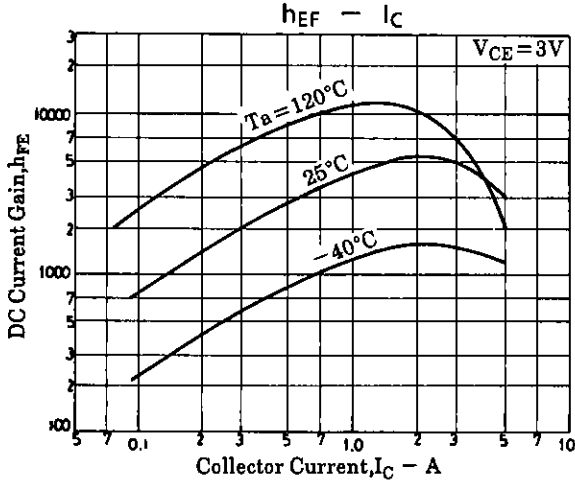
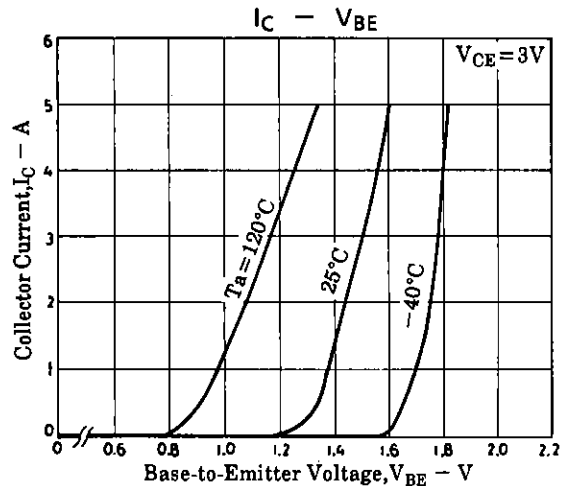
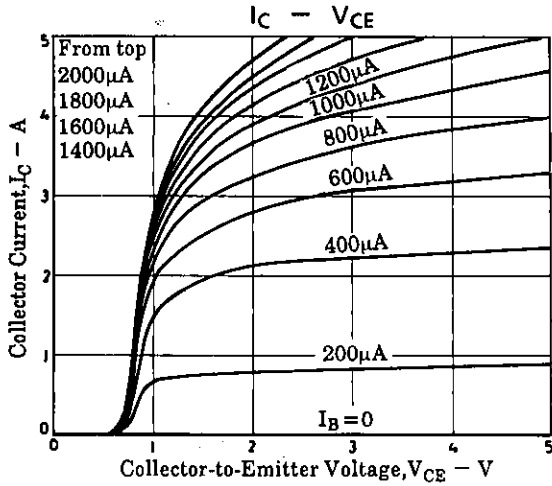
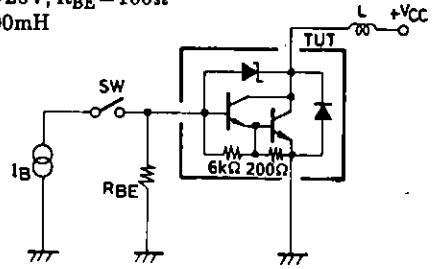
Specified Test Circuit

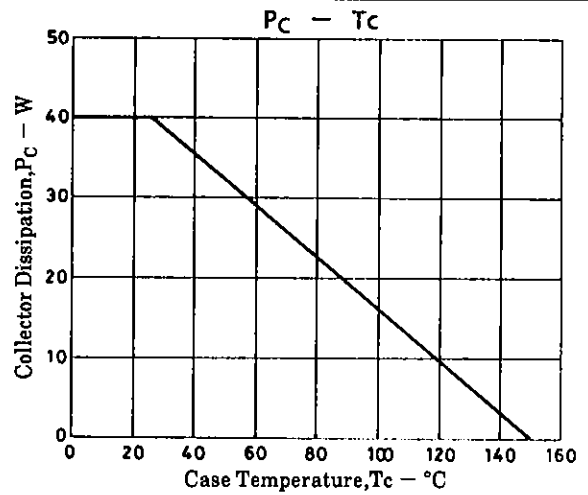
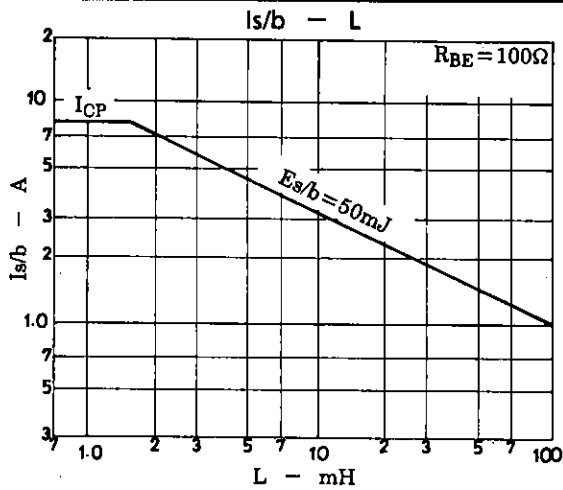
PW = 50μs, Duty Cycle ≤ 1%  
 500I<sub>B1</sub> = -500I<sub>B2</sub> = I<sub>C</sub>



Es/b Test Circuit

V<sub>CC</sub> = 20V, R<sub>BE</sub> = 100Ω  
 L = 100mH





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