Ordering number: EN 2272A

SANYO

No.2272A

2SC4006

NPN Planar Type 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 and wide ASO
- On-chip zener diode of 50±8V between collector and base
- Uniformity in collector to base breakdown voltage due to accurate impurity diffusion process
- Large inductive load handling capability
- Micaless package facilitating mounting

Absolute Maximum Ratings at Ta=25°C

				unit
Collector to Base Voltage	V_{CBO}		42*	V
Collector to Emitter Voltage	V_{CEO}		42*	V
Emitter to Base Voltage	V_{EBO}		6	V
Collector Current	I_C		3	A
Peak Collector Current	i_{cp}		6	A
Base Current	I_B		0.6	A
Collector Dissipation	P_C		2.0	W
		Tc=25°C	20	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

*: On-chip Zener diode of 50±8V

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			2	mA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=1.5A	2000	4000		
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=1.5A		180		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=1.5A, I_B=6mA		1.0	1.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=1.5A, I_B=6mA			2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=0.1mA, I_E=0	42	50	58	V

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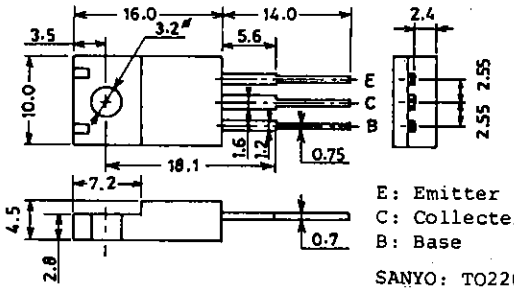
Package Dimensions 2041
(unit: mm)



E: Emitter
C: Collecter
B: Base

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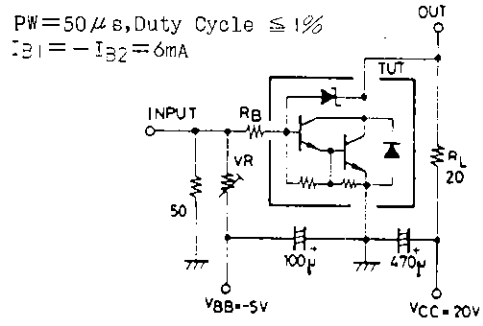
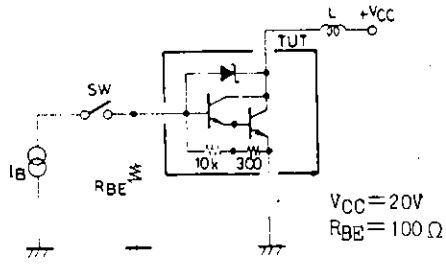
			min	typ	max	unit
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	42	50	58	V
Inductive Load Handling Capability	Es/b	L=100mH, R_{BE}=100ohms	30			mJ
Turn-on Time	t_{on}	See specified Test Circuit.		0.2		μs
Storage Time	t_{stg}	V_{CC}=20V, I_C=1.5A		3.0		μs
Fall Time	t_f	I_{B1}=-I_{B2}=6mA		0.7		μs

Switching Time Test Circuit



Es/b Test Circuit



Unit (resistance: Ω, capacitance: F)