Ordering number:EN2488

NPN Triple Diffused Planar Type Darlington Silicon Transistor

2SC3664

400V/20A Driver Applications

Applications

· Induction cookers.
· High-voltage, high power switching.

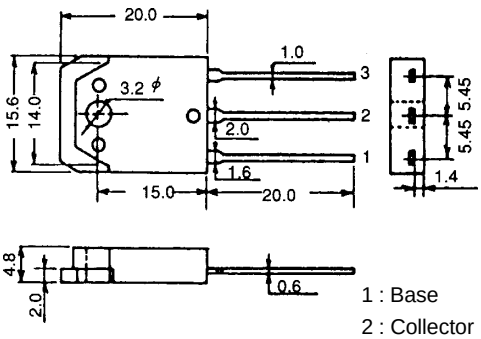
Features

· Fast speed (adoption of MBIT process).
· High breakdown voltage (V_{CBO}=800V).
· High reliability (adoption of HVP process).
· On-chip damper diode.

Package Dimensions

unit:mm

2022A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

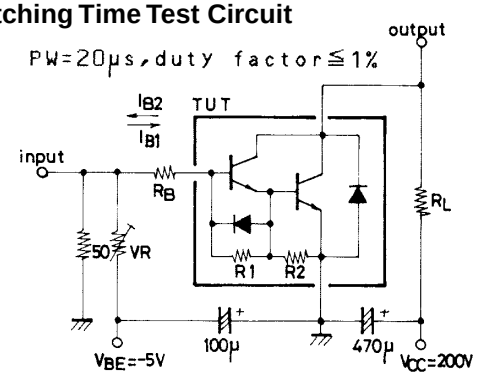
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		800	V
Collector-to-Emitter Voltage	V_{CEO}		400	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		20	A
Collector Current (Pulse)	I_{CP}		40	A
Base Current	I_B		3	A
Collector Dissipation	P_C	Tc=25˚C	150	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–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}=800V, I_E=0			1.0	mA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5V, I_C=0			600	mA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=20A	80			
Diode Forward Voltage	V_F	I_{EC}=20A			2.0	V
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=20A, I_B=1A			2.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=20A, I_B=1A			2.5	V
Collector-to-Emitter Sustain Voltage	$V_{CEO(sus)}$	I_C=100mA	400			V
Fall Time	t_f	I_C=20A, I_{B1}=1A, I_{B2}=–4A, V_{CC}=200V, R_L=10Ω			1.5	μs

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Switching Time Test Circuit



Unit (resistance : Ω, capacitance : F)