Ordering number: EN1071D

SANYO

No.1071D

2SC3152

NPN Triple Diffused Planar Silicon Transistor

Switching Regulator Applications

Features

- High breakdown voltage ($V_{CBO} \geqq 900V$).
- High switching speed.
- Wide ASO.

Absolute Maximum Ratings at Ta = 25°C

				unit
Collector-to-Base Voltage	V_{CBO}		900	V
Collector-to-Emitter Voltage	V_{CEO}		800	V
Emitter-to-Base Voltage	V_{EBO}		7	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}	Pulse, PW ≦ 300μs, Duty Cycle ≦ 10%	10	A
Base Current	I_B		1.5	A
Collector Dissipation	P_C	Tc = 25°C	80	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Electrical Characteristics at Ta = 25°C

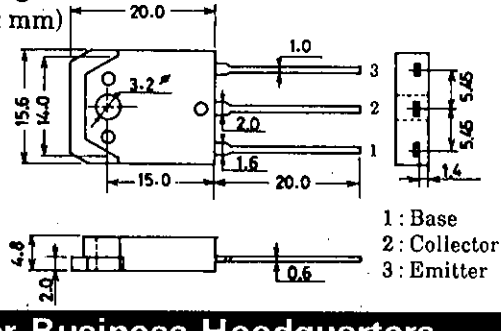
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 800V, I_E = 0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0			10	μA
DC Current Gain	$h_{FE}(1)$	V_{CE} = 5V, I_C = 0.2A	10※		40※	
	$h_{FE}(2)$	V_{CE} = 5V, I_C = 1A	8			
Gain-Bandwidth Product	f_T	V_{CE} = 10V, I_C = 0.2A		15		MHz
Output Capacitance	Cob	V_{CB} = 10V, f = 1MHz		60		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C = 1.5A, I_B = 0.3A			2.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C = 1.5A, I_B = 0.3A			1.5	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C = 1mA, I_E = 0	900			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C = 5mA, R_{BE} = ∞	800			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1mA, I_C = 0	7			V
C-E Sustain Voltage	$V_{CEO(sus)}$	I_C = 3A, L = 50μH, I_B = 1A	800			V
	$V_{CEX(sus)}(1)$	I_C = 1A, I_{B1} = 0.2A, I_{B2} = −0.2A, L = 2mH, Clamped	800			V
	$V_{CEX(sus)}(2)$	I_C = 0.5A, I_{B1} = 0.4A, I_{B2} = −0.1A, L = 5mH, Clamped	900			V
Rise Time	t_{on}	I_C = 2A, I_{B1} = 0.4A, I_{B2} = −0.8A, R_L = 20Ω, V_{CC} = 400V			1.0	ns
Storage Time	t_{stg}				3.0	ns
Fall Time	t_f				0.7	ns

※ : For the $h_{FE}(1)$ of the 2SC3152, specify two ranks or more in principle.

10 K 20	15 L 30	20 M 40

Package Dimensions 2022A

(unit : mm)



1 : Base
2 : Collector
3 : Emitter

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Switching Time Test Circuit