

2SC3909

Silicon NPN Triple Diffused Planar

☆High Voltage High Speed Transistor

T-33-13

Application Example:
Switching Regulator and
General Purpose

● Outline Drawing 2 ... MT-100(TO3P)

Absolute Maximum Ratings (Ta=25°C)

Symbol	2SC3909	Unit
V _{CB0}	900	V
V _{CEO}	800	V
V _{EB0}	7	V
I _C	5 (Pulse 10)	A
I _B	2.5	A
P _C	100 (T _C = 25°C)	W
T _J	150	°C
T _{stg}	-55~+150	°C

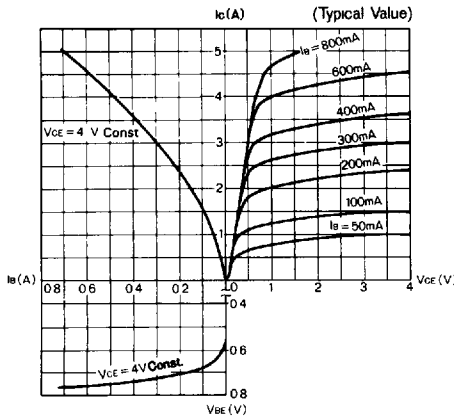
Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SC3909	Unit
I _{CB0}	V _{CB} =800V	100max	μA
I _{EB0}	V _{EB} =7V	100max	μA
V _{(BR)CEO}	I _C = 10mA	800min	V
h _{FE}	V _{CE} =4V, I _C =1.5A	10min	
V _{CE(sat)}	I _C = 1.5A, I _B =0.3A	1max	V
V _{BE(sat)}	I _C = 1.5A, I _B =0.3A	1.5max	V
f _r	V _{CE} =12V, I _E =-0.7A	4typ	MHz

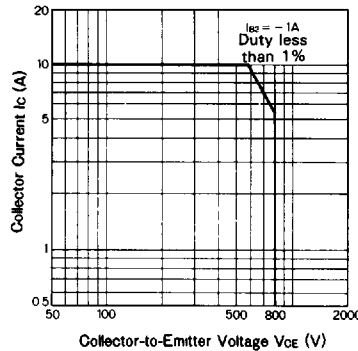
Typical Switching Characteristics (Common Emitter)

V _{CC} (V)	R _L (Ω)	I _C (A)	V _{BE1} (V)	V _{BE2} (V)	I _{B1} (A)	I _{B2} (A)	t _{on} (μs)	t _{stg} (μs)	t _r (μs)
250	166	1.5	10	-5	0.2	-0.6	1.0max	4.0max	0.5max

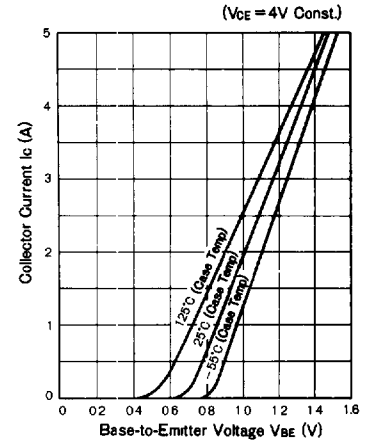
Common Emitter Characteristics



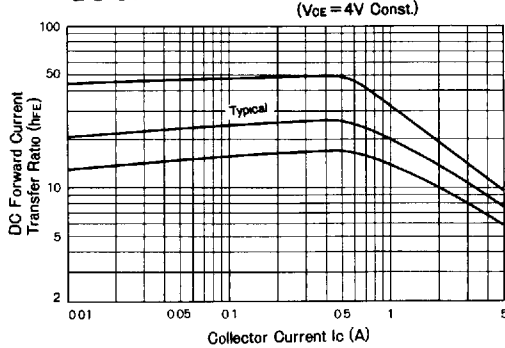
Maximum Areas for Safe Operation at Reverse Bias (ASO)



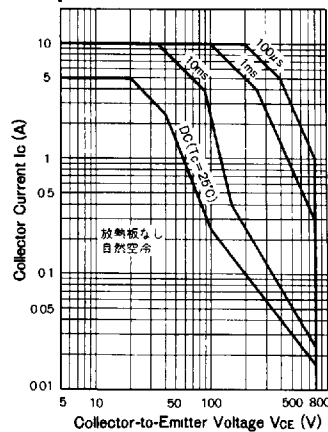
Temperature Characteristics



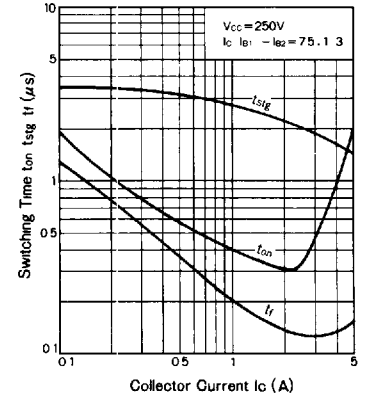
DC Current Gain Characteristics



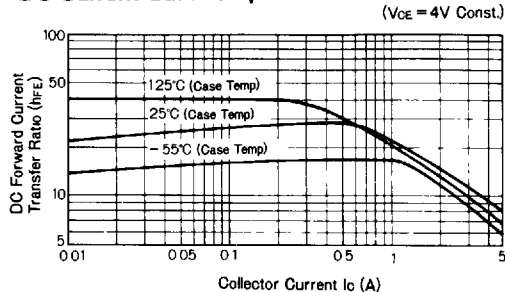
Maximum Areas For Safe Operation (ASO) (Single Pulse)



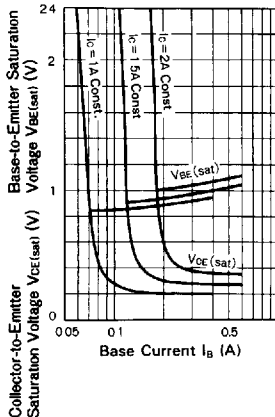
t_{on} · t_{stg} · t_r - I_C Characteristics (Typical Value)



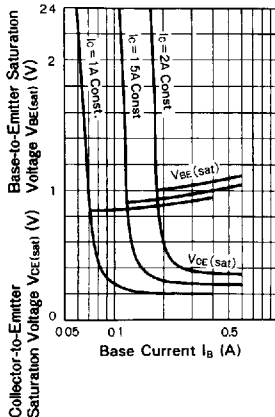
DC Current Gain Temperature Characteristics



V_{BE(sat)} - I_C Characteristics (Typical Value)



V_{CE(sat)} - I_C Characteristics (Typical Value)



T-91-20

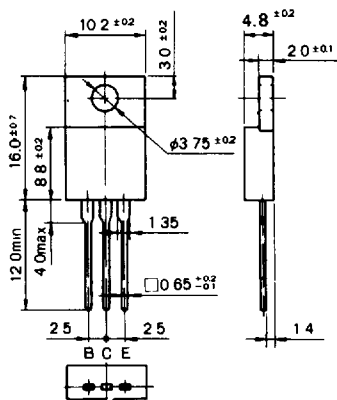
Outline Drawings/Accessories

Outline Drawing

- Nonflammability: UL94V-0 or equivalent
- Unit: in mm

Outline Drawing 1

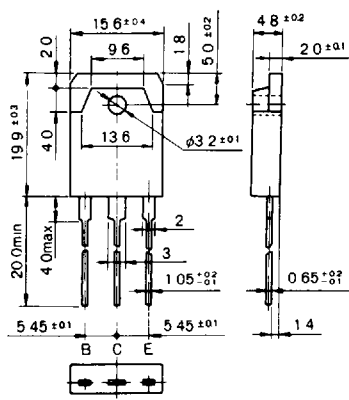
MT-25(T0220)



Weight: Approx. 2.6g

Outline Drawing 2

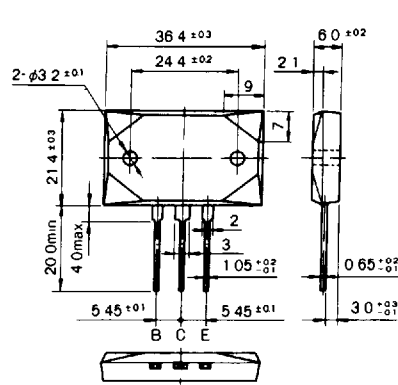
MT-100(T03P)



Weight: Approx. 6.0g

Outline Drawing 3

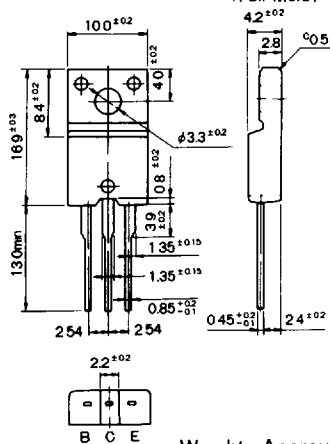
MT-200



Weight: Approx. 18.4g

Outline Drawing 4

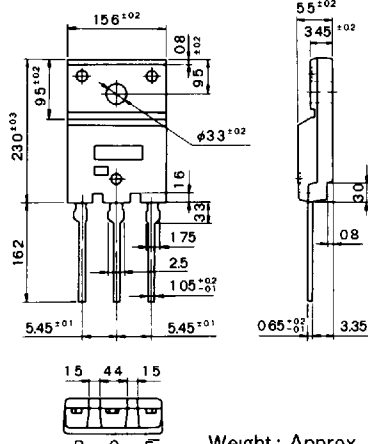
FM20 (Full Mold)



Weight: Approx. 2.0g

Outline Drawing 5

FM100 (Full Mold)



Weight: Approx. 6.5g

Accessories

☆Sanken Transistors do not include accessories. Accessories may be attached at a cost if requested.

☆Sanken transistor case is a standard size, and can replace any generally sold product.

- Heatsink: Mica, with a thickness of 0.06 mm, +0.045 -0.005 allowance

- Insulation Bush for MT-25(T0220)

Type Name: Molded (10) Mica Type Name: Molded (14) Mica Type Name: Molded (9) Mica

