

2SA1643

Silicon PNP Epitaxial Planar

☆Low $V_{CE(sat)}$ Transistor ☆Complement to type 2SC4327

Application Example:

Video Cam Adaptor, DC Motor Driver and General Purpose

●Outline Drawing 4FM20

Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

Symbol	2SA1643	Unit
V_{CBO}	-50	V
V_{CEO}	-35	V
V_{EBO}	-6	V
I_C	-7 (Pulse -12)	A
I_B	-1	A
P_C	25 ($T_C = 25^\circ\text{C}$)	W
T_j	150	$^\circ\text{C}$
T_{stg}	-55~+150	$^\circ\text{C}$

Electrical Characteristics

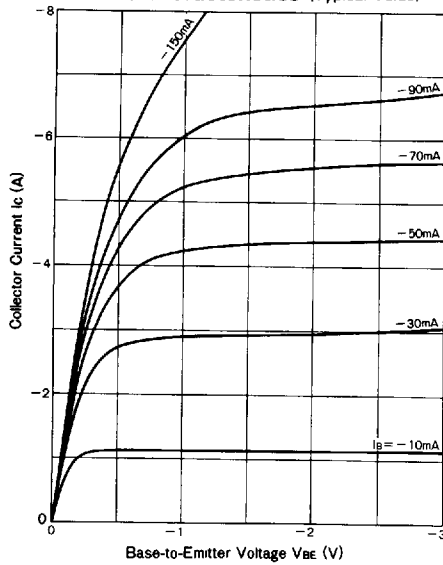
($T_a=25^\circ\text{C}$)

Symbol	Conditions	2SA1643	Unit
I_{CBO}	$V_{CB}=-50\text{V}$	-10max	μA
I_{EBO}	$V_{EB}=-6\text{V}$	-10max	μA
$V_{(BR)CEO}$	$I_C = -10\text{mA}$	-35min	V
h_{FE}	$V_{CE}=-2\text{V}, I_C=-5\text{A}$	50min	
$V_{CE(sat)}$	$I_C = -5\text{A}, I_B = -0.3\text{A}$	-0.5max	V
f_T	$V_{CE}=-12\text{V}, I_E=1\text{A}$	75typ	MHz

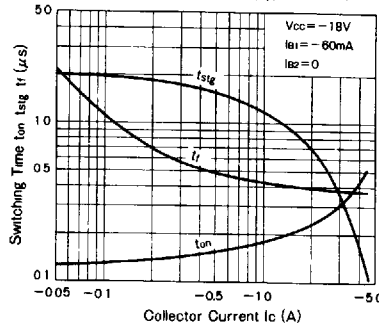
Typical Switching Characteristics (Common Emitter)

V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (A)	I_{B2} (A)	t_{on} (μs)	t_{stg} (μs)	t_r (μs)
-18	6	-3	-10	0	-60	0	0.3typ	0.4typ	0.4typ

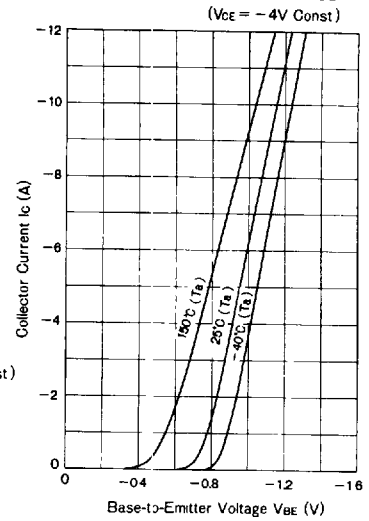
$I_C - V_{CE}$ Characteristics (Typical Value)



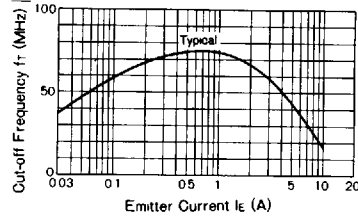
$t_{on} \cdot t_{stg} \cdot t_r - I_C$ Characteristics (Typical Value)



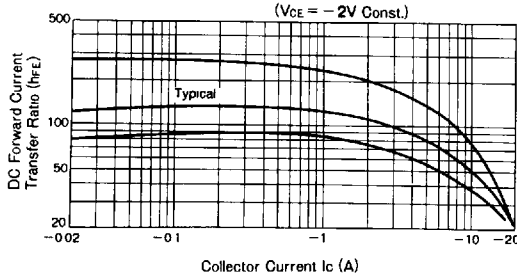
Temperature Characteristics



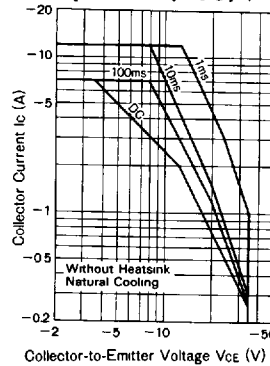
Frequency Characteristics ($V_{CE} = 12\text{V}$ Const)



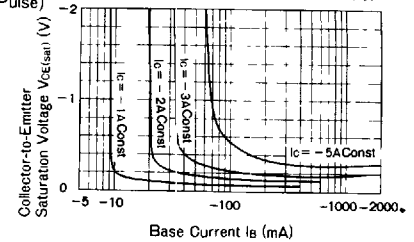
DC Current Gain Characteristics



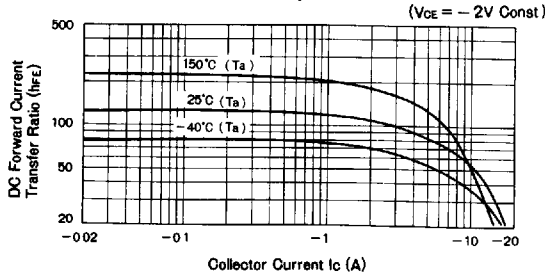
Maximum Areas For Safe Operation (ASO) (Single Pulse)



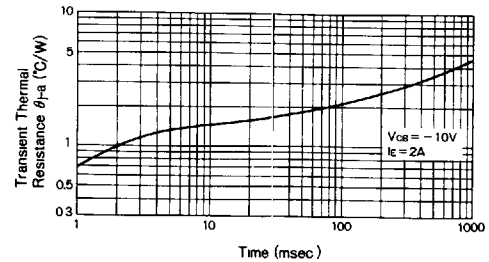
$V_{CE(sat)} - I_B$ Characteristics (Typical Value)



DC Current Gain Temperature Characteristics



Transient Thermal Resistance Characteristics



T-91-20

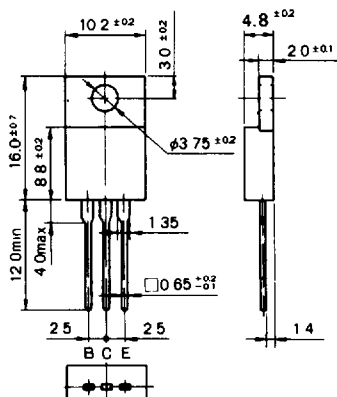
Outline Drawings/Accessories

Outline Drawing

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

Outline Drawing 1

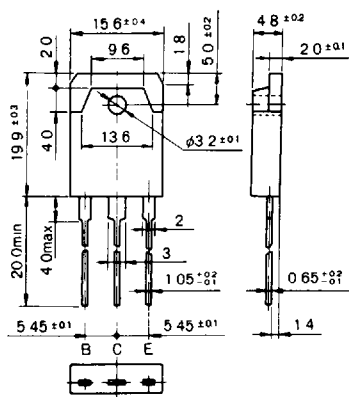
MT-25(T0220)



Weight: Approx. 2.6 g

Outline Drawing 2

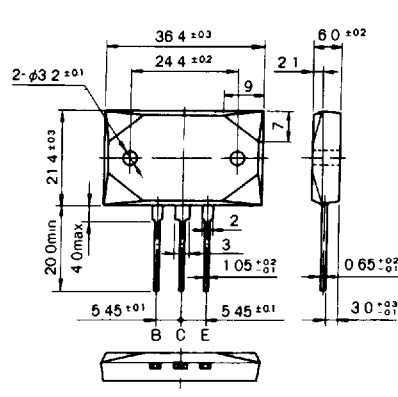
MT-100(T03P)



Weight: Approx. 6.0 g

Outline Drawing 3

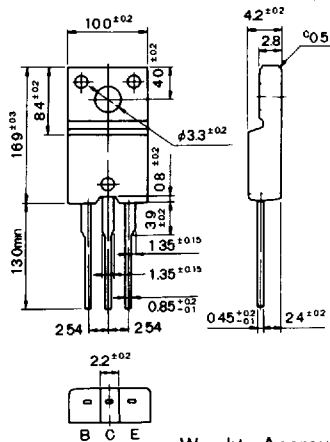
MT-200



Weight: Approx. 18.4 g

Outline Drawing 4

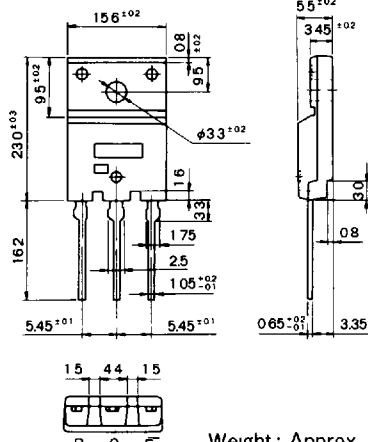
FM20
(Full Mold)



Weight: Approx. 2.0 g

Outline Drawing 5

FM100
(Full Mold)



Weight: Approx. 6.5 g

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

