2SA1667/1668

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC4381/4382)

Application : TV Vertical Output, Audio Output Driver and General Purpose

■Absolute maximum ratings (Ta=25°C)

Symbol	Ratings 2SA1667	Ratings 2SA1668	Unit
V_{CBO}	–150	–200	V
V_{CEO}	–150	–200	V
V_{EBO}	–6		V
I_C	–2		A
I_B	–1		A
P_C	25(Tc=25°C)		W
Tj	150		°C
Tstg	–55 to +150		°C

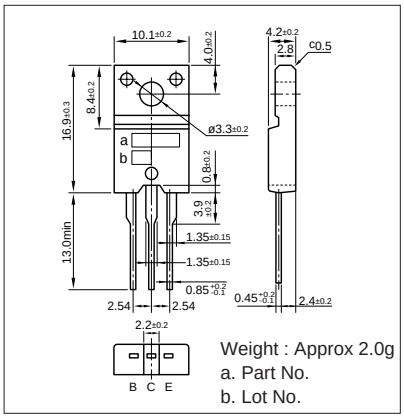
■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings 2SA1667	Ratings 2SA1668	Unit
I_{CBO}		–10max	–10max	μA
	V_{CB}=	–150	–200	V
I_{EBO}	V_{EB}=–6V	–10max		μA
$V_{(BR)CEO}$	I_C=–25mA	–150min	–200min	V
h_{FE}	V_{CE}=–10V, I_C=–0.7A	60min		
$V_{CE(sat)}$	I_C=–0.7A, I_B=–0.07A	–1.0max		V
f_T	V_{CE}=–12V, I_E=0.2A	20typ		MHz
C_{OB}	V_{CB}=–10V, f=1MHz	60typ		pF

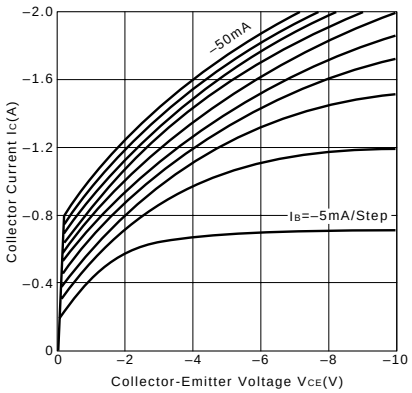
■Typical Switching Characteristics (Common Emitter)

V_{CC} (V)	R_L (Ω)	I_C (A)	V_{BB1} (V)	V_{BB2} (V)	I_{B1} (mA)	I_{B2} (mA)	ton (μs)	tstg (μs)	tf (μs)
–20	20	–1	–10	5	–100	100	0.4typ	1.5typ	0.5typ

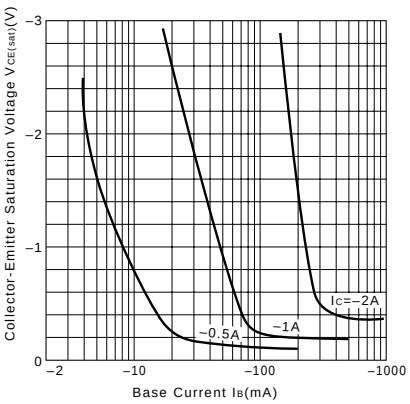
External Dimensions FM20 (TO220F)



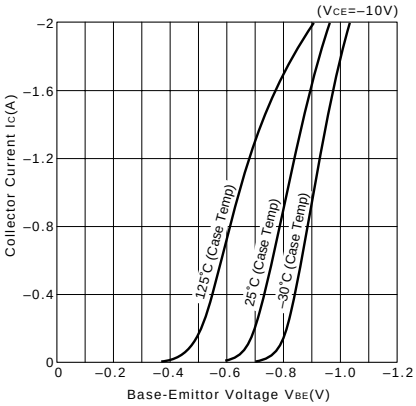
I_C–V_{CE} Characteristics (Typical)



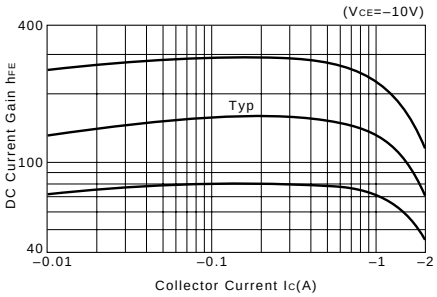
V_{CE}(sat)–I_B Characteristics (Typical)



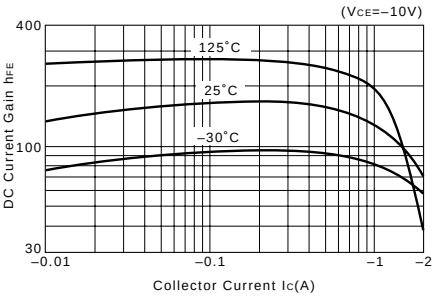
I_C–V_{BE} Temperature Characteristics (Typical)



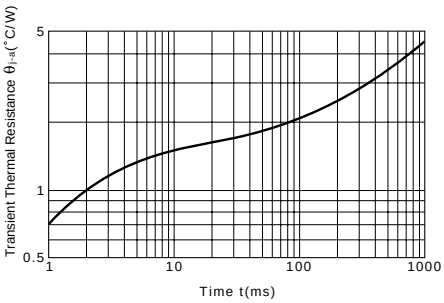
h_{FE}–I_C Characteristics (Typical)



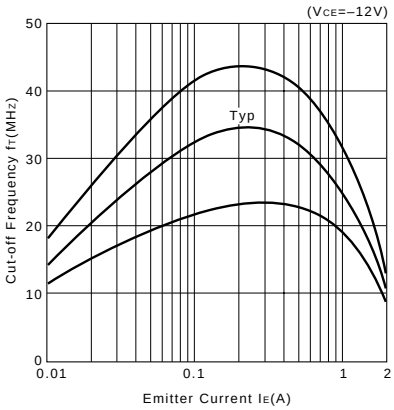
h_{FE}–I_C Temperature Characteristics (Typical)



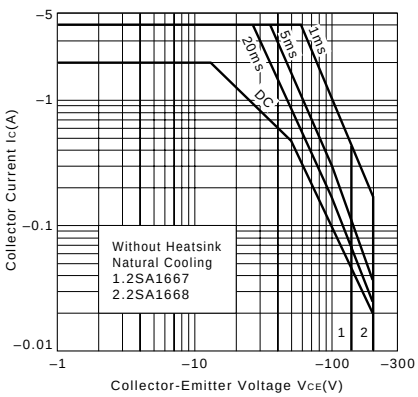
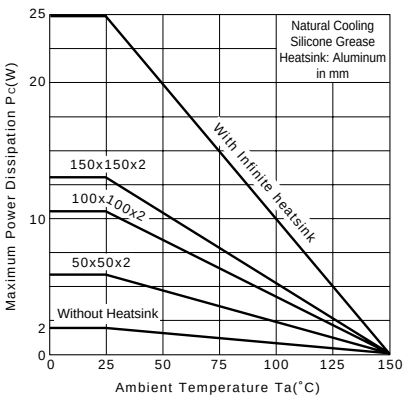
$\theta_{j\text{-}a}$–t Characteristics



f_T–I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc–Ta Derating