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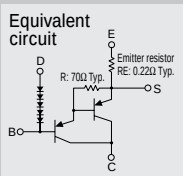
Built-in temperature compensation diodes Built-in emitter resistor Darlington

SAP09P

Equivalent circuit



(Complement to type SAP09N)

Application: Audio

■Absolute maximum ratings (Ta=25°C)

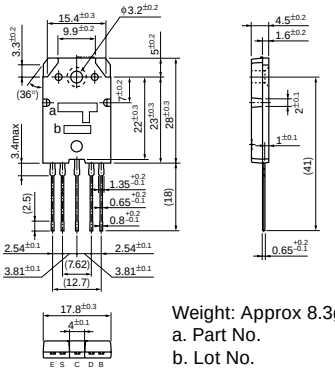
Symbol	Ratings	Unit
V_{CBO}	150	V
V_{CEO}	–150	V
V_{EBO}	–5	V
I_C	–10	A
I_B	–1	A
P_C	80 (Tc=25°C)	W
Di I_F	10	mA
Tj	150	°C
Tstg	–40 to +150	°C

■Electrical Characteristics (Ta=25°C)

Symbol	Conditions	Ratings min	Ratings typ	Ratings max	Unit
I_{CBO}	V_{CE}=–150V			–100	μA
I_{EBO}	V_{EB}=–5V			–100	μA
V_{CEO}	I_C=–30mA	–150			V
h_{FE}*	V_{CE}=–4V, I_C=–6A	5000		20000	
$V_{CE(sat)}$	I_C=–6A, I_B=–6mA			–2.0	V
$V_{BE(sat)}$	I_C=–6A, I_B=–6mA			–2.5	V
V_{BE}	V_{CE}=–20V, I_C=–40mA		1230		mV
Di V_F	I_F=2.5mA		1580		mV
R_E	I_E=1A	0.176	0.22	0.264	Ω

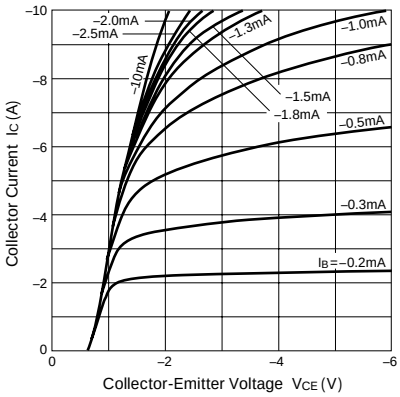
*h_{FE} Rank $\bar{O}$ (5000 to 12000), Y (8000 to 20000)

External Dimensions (Unit: mm)

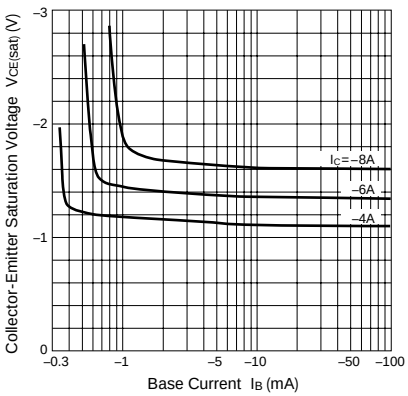


Weight: Approx 8.3g
a. Part No.
b. Lot No.

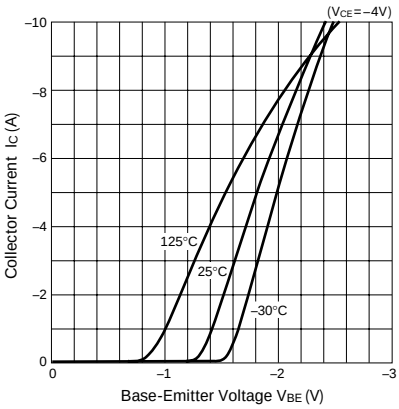
I_C–V_{CE} Characteristics (Typical)



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



I_C–V_{BE} Temperature Characteristics (Typical)



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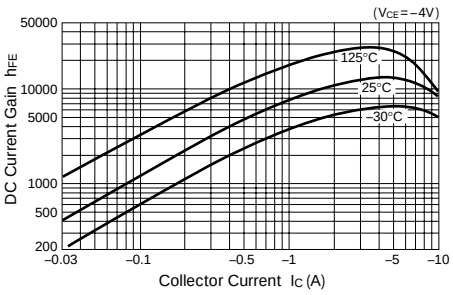
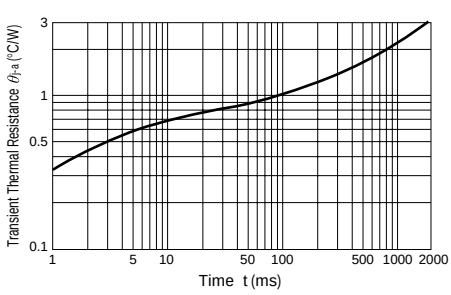
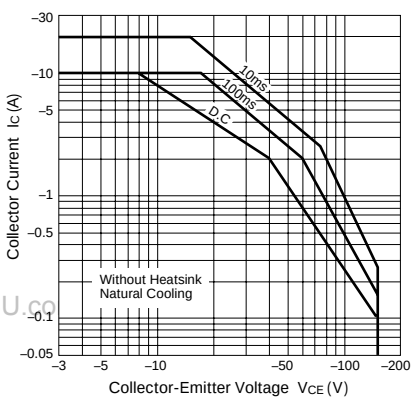
h_{FE}–I_C Characteristics (Typical)



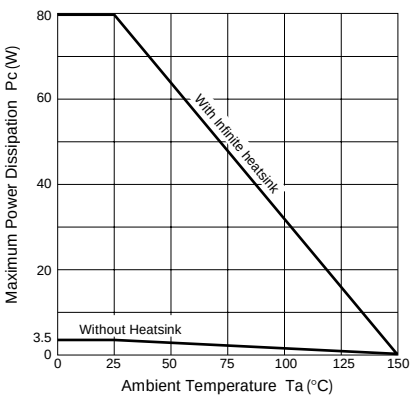
$\theta_{j\text{-}a}$–t Characteristics



Safe Operating Area (Single Pulse)



P_C–Ta Derating



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