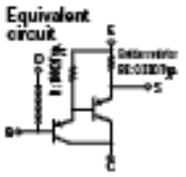
Built-in temperature compensation diodes
Built-in emitter resistor
Darlington

SAP16P

Equivalent circuit



(Complement to type SAP16N)

Application: Audio

■Absolute maximum ratings (Ta=25°C)

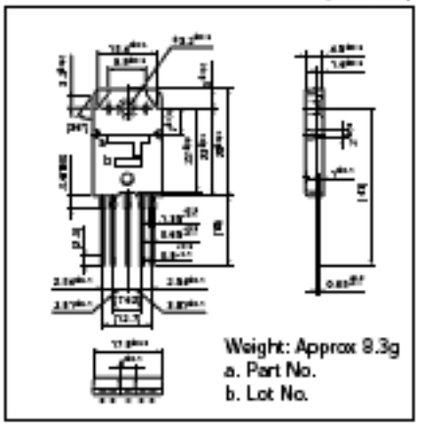
Symbol	Ratings	Unit
V_{CBO}	−160	V
V_{CEO}	−160	V
V_{EBO}	−5	V
I_C	−15	A
I_B	−1	A
P_C	150(Tc=25°C)	W
Di_{IF}	10	mA
Tj	150	°C
Tstg	−40 to +150	°C

■Electrical Characteristics (Ta=25°C)

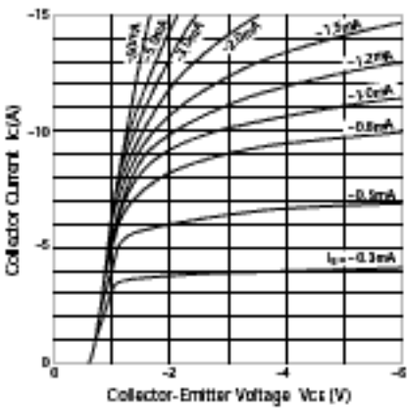
Symbol	Conditions	Ratings min	Ratings typ	Ratings max	Unit
I_{CBO}	V_{CB}=−160V			−100	μA
I_{EBO}	V_{EB}=−5V			−100	μA
V_{CEO}	I_C=−30mA	−160			V
h_{FE}*	V_{CE}=−4V, I_C=−10A	5000		20000	
$V_{CE(sat)}$	I_C=−10A, I_B=−10mA			−2.0	V
$V_{BE(sat)}$	I_C=−10A, I_B=−10mA			−2.5	V
V_{BE}	V_{CE}=−20V, I_C=−40mA		1200		mV
Di_{VF}	I_F=2.5mA		1540		mV
R_E	I_E=1A	0.176	0.22	0.264	Ω
R_{EB}		90	100	110	Ω

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

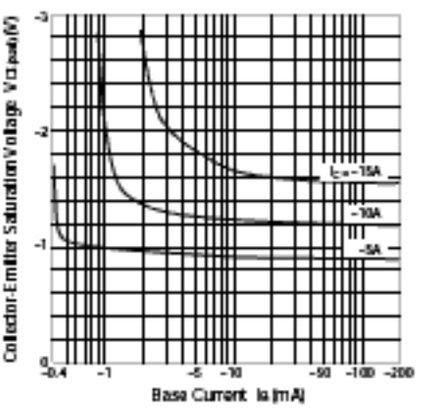
External Dimensions (Unit: mm)



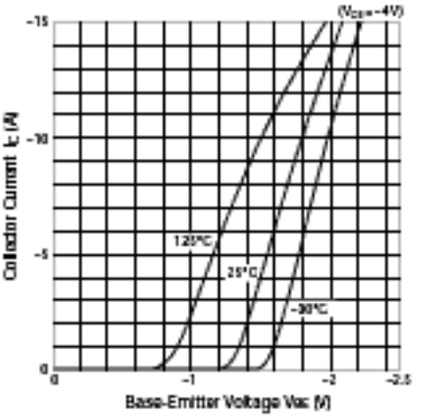
Ic−VCE Characteristics (Typical)



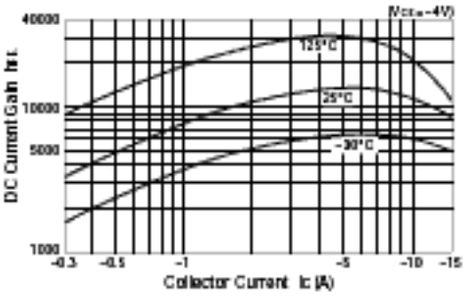
VCE(sat)−IB Characteristics (Typical)



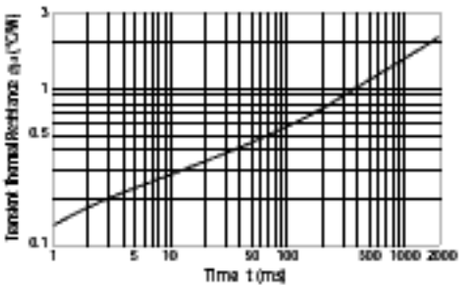
Ic−VBE Temperature Characteristics (Typical)



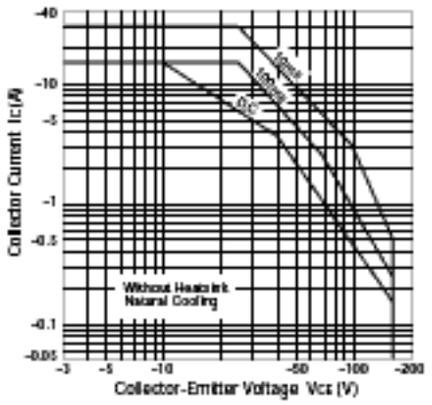
hFE−Ic Characteristics (Typical)



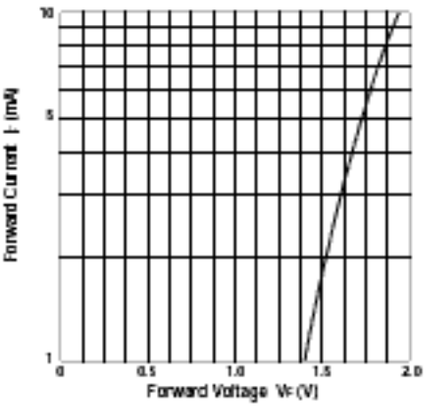
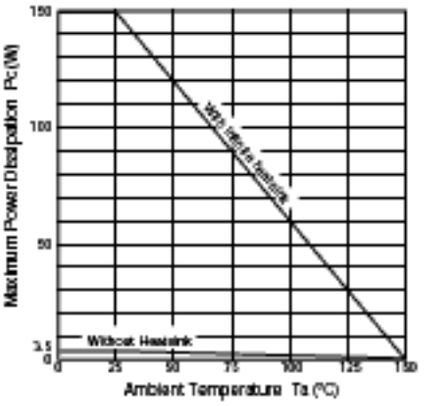
θj-a−t Characteristics



Safe Operating Area (Single Pulse)



Di IF−VF Characteristics (Typical)



Pc−Ta Derating