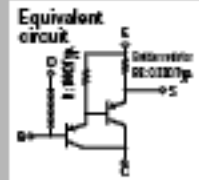


Built-in temperature compensation diodes
Built-in emitter resistor
Darlington

SAP16P



(Complement to type SAP16N)

Application: Audio

■ Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Symbol	Rating	Unit
V_{CE0}	-160	V
V_{CE}	-160	V
V_{BE}	-5	V
I_C	-15	A
I_E	-1	A
P_C	150 ($T_C = 25^\circ\text{C}$)	W
I_{FR}	10	mA
T_j	150	$^\circ\text{C}$
T_{stg}	-40 to +150	$^\circ\text{C}$

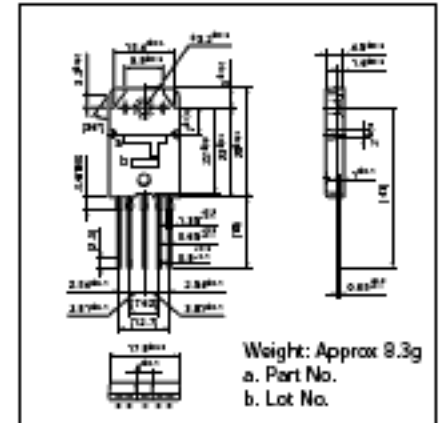
■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Symbol	Conditions	Ratings			Unit
		min	typ	max	
I_{CE0}	$V_{CE} = -160\text{V}$			-100	μA
I_{E0}	$V_{BE} = -5\text{V}$			-100	μA
V_{CE0}	$I_C = -30\text{mA}$	-160			V
h_{FE}^*	$V_{CE} = -4\text{V}, I_C = -10\text{A}$	5000		20000	
$V_{CE(sat)}$	$I_C = -10\text{A}, I_B = -10\text{mA}$			-2.0	V
$V_{BE(sat)}$	$I_C = -10\text{A}, I_B = -10\text{mA}$			-2.5	V
V_{BE}	$V_{CE} = -20\text{V}, I_C = -40\text{mA}$		1200		mV
$D_i V_F$	$I_F = 2.5\text{mA}$		1540		mV
R_C	$I_C = -1\text{A}$	0.176	0.22	0.264	Ω
R_{BE}		90	100	110	Ω

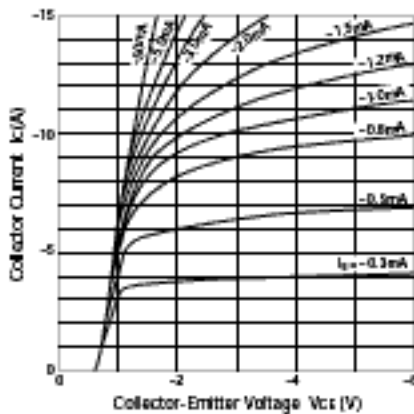
* h_{FE} Rank: X (5000 to 12000), Y (8000 to 20000)

External Dimensions

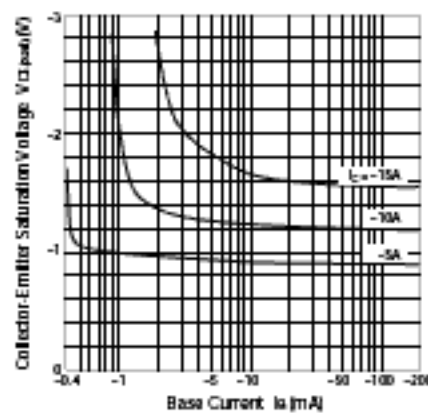
(Unit: mm)



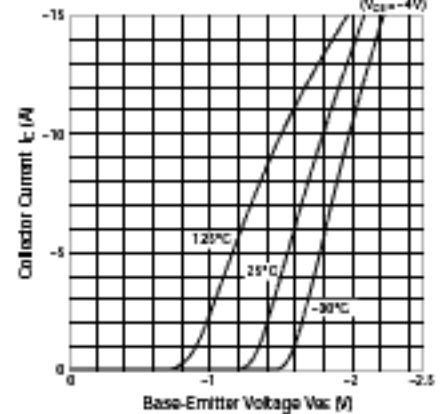
$I_C - V_{CE}$ Characteristics (Typical)



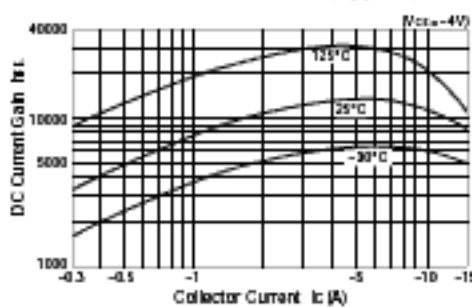
$V_{CE(sat)} - I_B$ Characteristics (Typical)



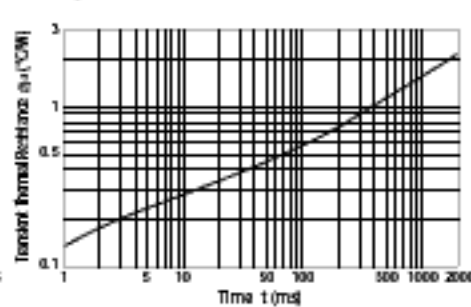
$I_C - V_{BE}$ Temperature Characteristics (Typical)



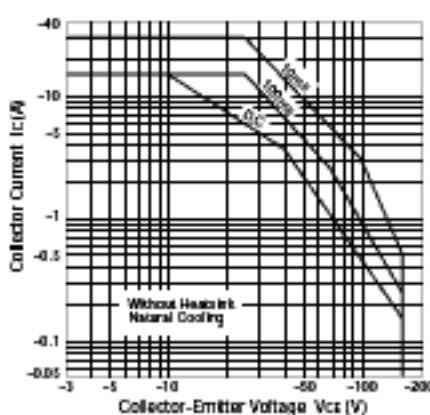
$h_{FE} - I_C$ Characteristics (Typical)



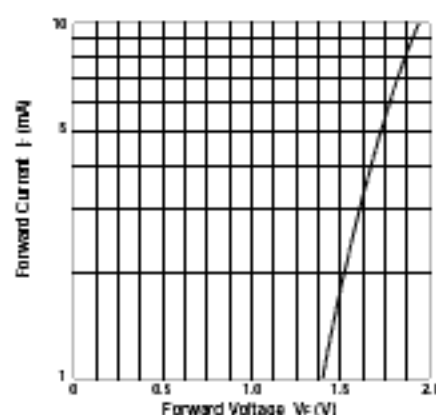
$\theta_{j-a} - t$ Characteristics



Safe Operating Area (Single Pulse)



$D_i I_F - V_F$ Characteristics (Typical)



$P_C - T_a$ Derating

