

# 2SA0719, 2SA0720 (2SA719, 2SA720)

## Silicon PNP epitaxial planar type

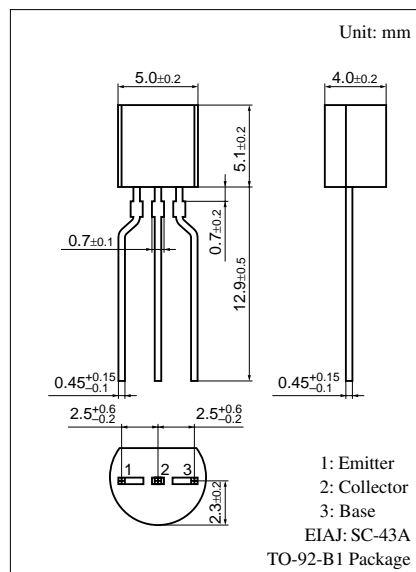
For low-frequency power amplification and driver amplification  
Complementary to 2SC1317 and 2SC1318

### ■ Features

- Complementary pair with 2SC1317 and 2SC1318.

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter		Symbol	Rating	Unit
Collector to base voltage	2SA0719	$V_{\text{CBO}}$	−30	V
	2SA0720		−60	
Collector to emitter voltage	2SA0719	$V_{\text{CEO}}$	−25	V
	2SA0720		−50	
Emitter to base voltage		$V_{\text{EBO}}$	−5	V
Peak collector current		$I_{\text{CP}}$	−1	A
Collector current		$I_{\text{C}}$	−500	mA
Collector power dissipation		$P_{\text{C}}$	625	mW
Junction temperature		$T_{\text{j}}$	150	°C
Storage temperature		$T_{\text{stg}}$	−55 to +150	°C



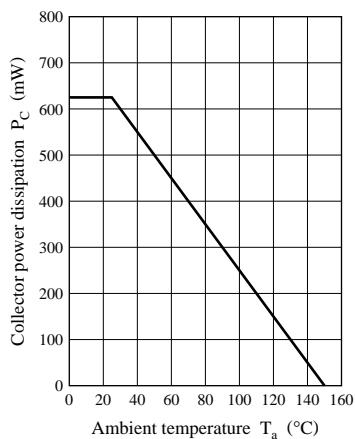
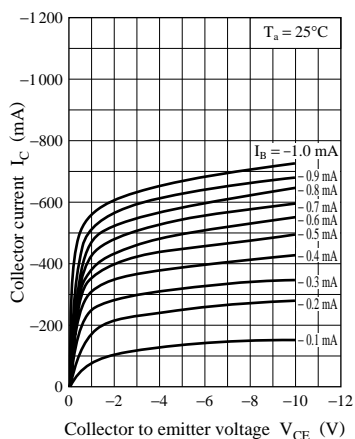
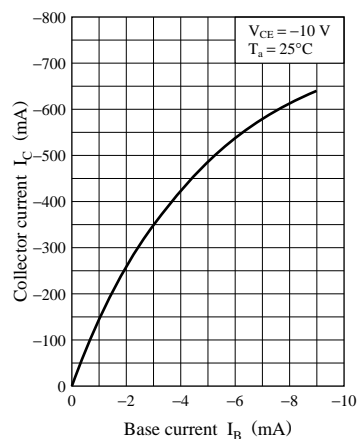
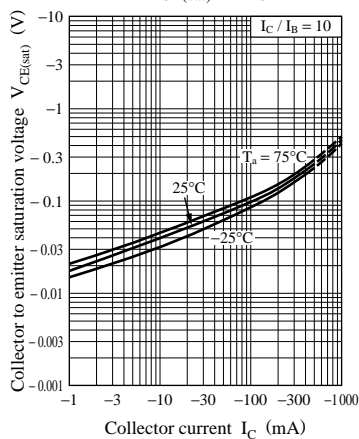
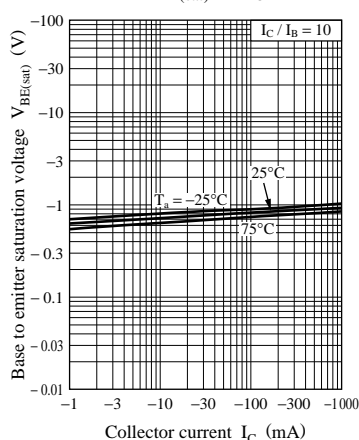
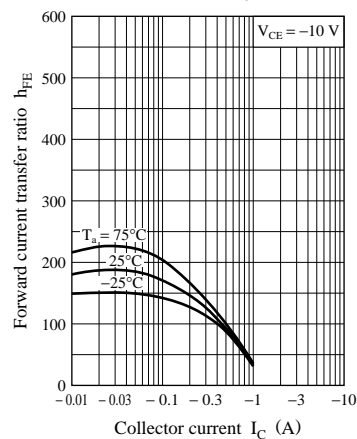
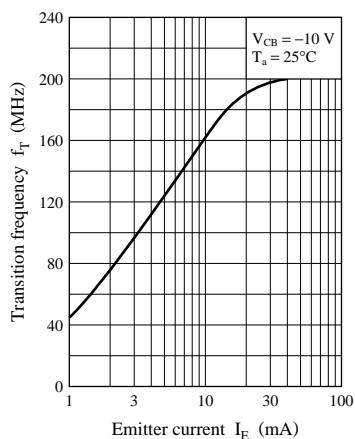
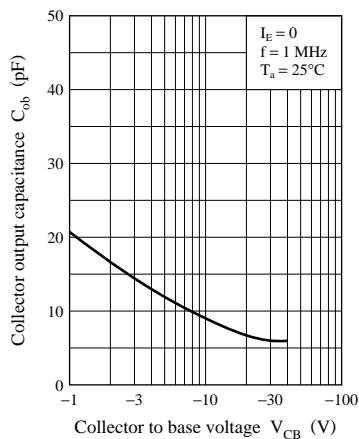
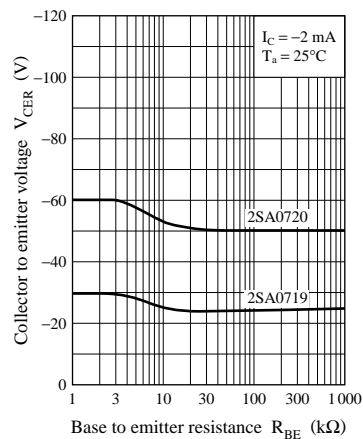
### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

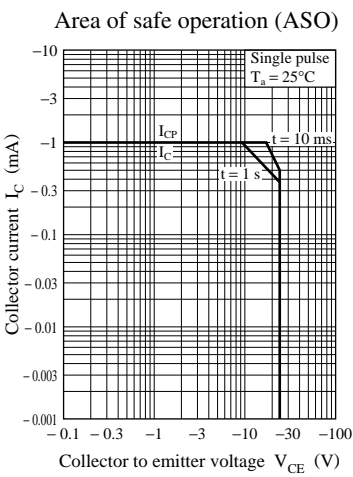
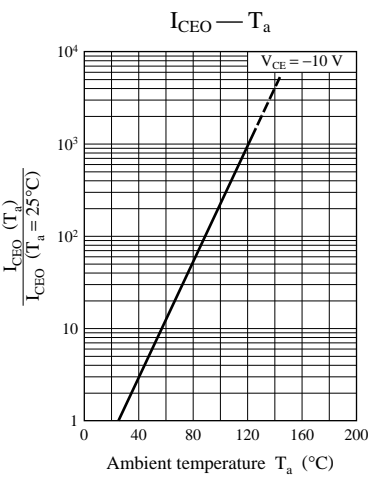
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{\text{CBO}}$	$V_{\text{CB}} = -20\text{ V}, I_{\text{E}} = 0$			– 0.1	$\mu\text{A}$
Collector to base voltage	2SA0719	$I_{\text{C}} = -10\text{ }\mu\text{A}, I_{\text{E}} = 0$	–30			V
	2SA0720		–60			
Collector to emitter voltage	2SA0719	$I_{\text{C}} = -10\text{ mA}, I_{\text{B}} = 0$	–25			V
	2SA0720		–50			
Emitter to base voltage	$V_{\text{EBO}}$	$I_{\text{E}} = -10\text{ }\mu\text{A}, I_{\text{C}} = 0$	–5			V
Forward current transfer ratio	$h_{\text{FE1}}^*$	$V_{\text{CE}} = -10\text{ V}, I_{\text{C}} = -150\text{ mA}$	85		340	
	$h_{\text{FE2}}$	$V_{\text{CE}} = -10\text{ V}, I_{\text{C}} = -500\text{ mA}$	40			
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = -300\text{ mA}, I_{\text{B}} = -30\text{ mA}$		– 0.35	– 0.6	V
Base to emitter saturation voltage	$V_{\text{BE(sat)}}$	$I_{\text{C}} = -300\text{ mA}, I_{\text{B}} = -30\text{ mA}$		–1.1	–1.5	V
Transition frequency	$f_{\text{T}}$	$V_{\text{CB}} = -10\text{ V}, I_{\text{E}} = 50\text{ mA}, f = 200\text{ MHz}$		200		MHz
Collector output capacitance	$C_{\text{ob}}$	$V_{\text{CB}} = -10\text{ V}, I_{\text{E}} = 0, f = 1\text{ MHz}$		6	15	pF

Note) \*:  $h_{\text{FE1}}$  Rank classification

Rank	Q	R	S
$h_{\text{FE1}}$	85 to 170	120 to 240	170 to 340

Note) The part numbers in the parenthesis show conventional part number.

$P_C - T_a$  $I_C - V_{CE}$  $I_C - I_B$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$  $V_{CER} - R_{BE}$ 



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