

**SANYO**

No.4509

**2SC5069**

NPN Epitaxial Planar Silicon Transistor  
 Low-Frequency General-Purpose Amp,  
 Driver Applications

**Features**

- High Current Capacity.
- Adoption of MBIT process.
- High DC current gain.
- Low collector-to-emitter saturation voltage.
- High  $V_{EBO}$ .

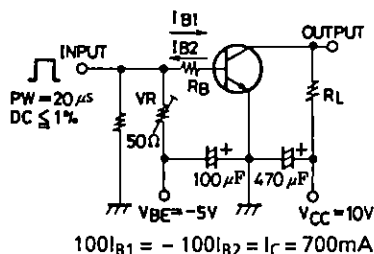
**Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

			unit
Collector-to-Base Voltage	$V_{CB0}$	30	V
Collector-to-Emitter Voltage	$V_{CEO}$	25	V
Emitter-to-Base Voltage	$V_{EBO}$	15	V
Collector Current	$I_C$	2	A
Collector Current (Pulse)	$I_{CP}$	4	A
Base Current	$I_B$	0.4	A
Collector Dissipation	$P_C$	1.5	W
Mounted on ceramic board (250mm <sup>2</sup> × 0.8mm)			
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

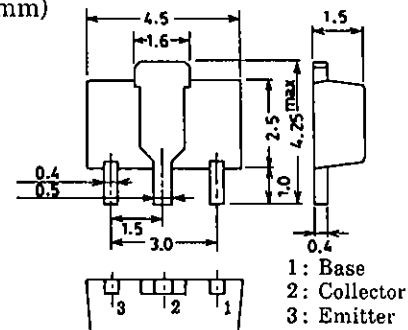
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 10\text{V}, I_C = 0$			100	nA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	800	1500	3200	
	$h_{FE(2)}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	600			
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$		260		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		27		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 20\text{mA}$	0.15	0.5		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 20\text{mA}$	0.85	1.2		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	30			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	25			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	15			V
Turn-ON Time	$t_{on}$	See specified Test Circuit		0.14		$\mu\text{s}$
Storage Time	$t_{stg}$	"		1.35		$\mu\text{s}$
Fall Time	$t_f$	"		0.1		$\mu\text{s}$

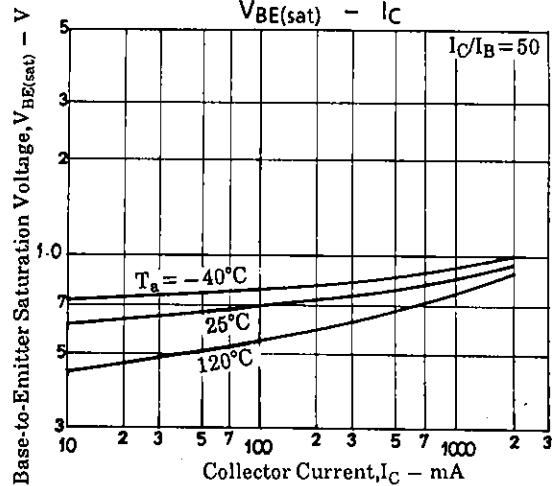
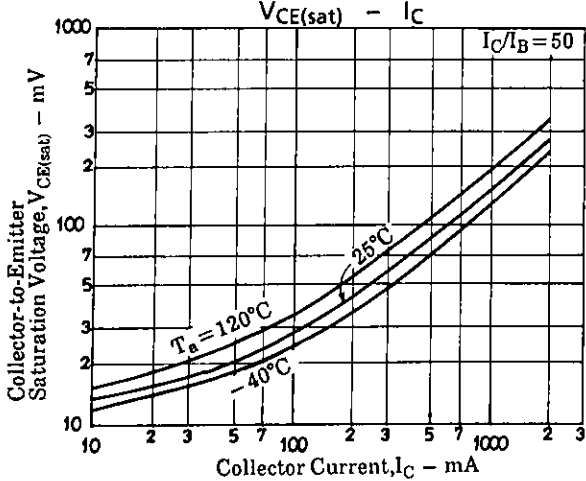
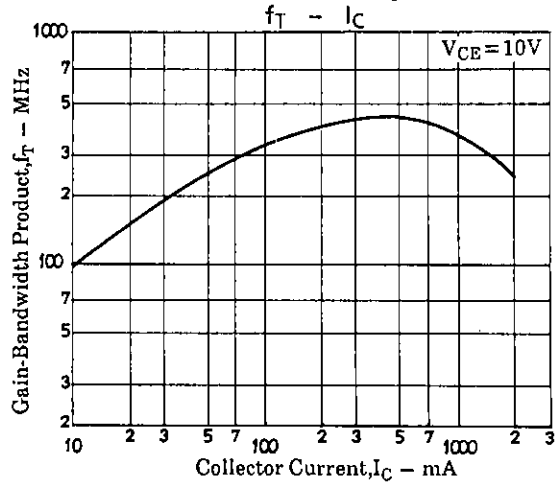
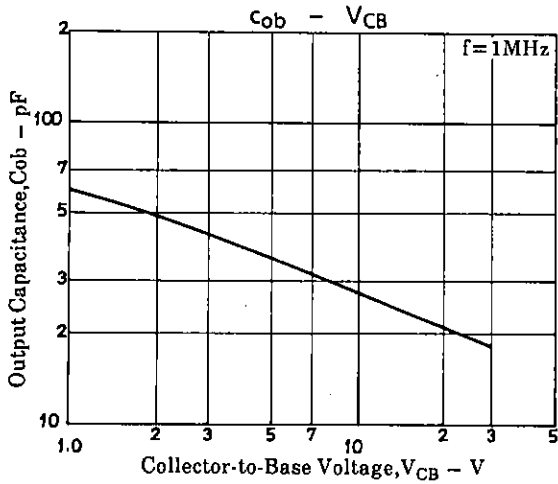
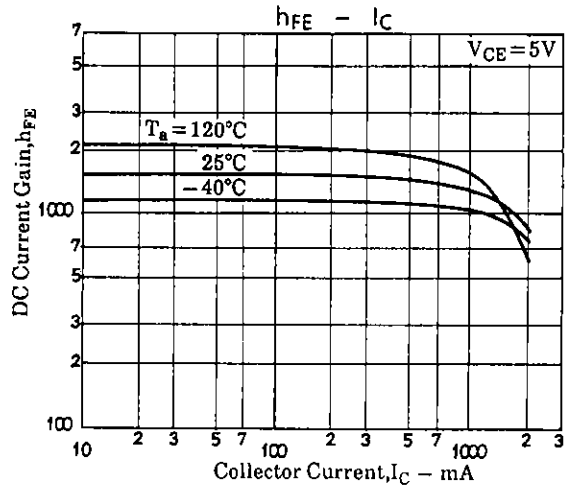
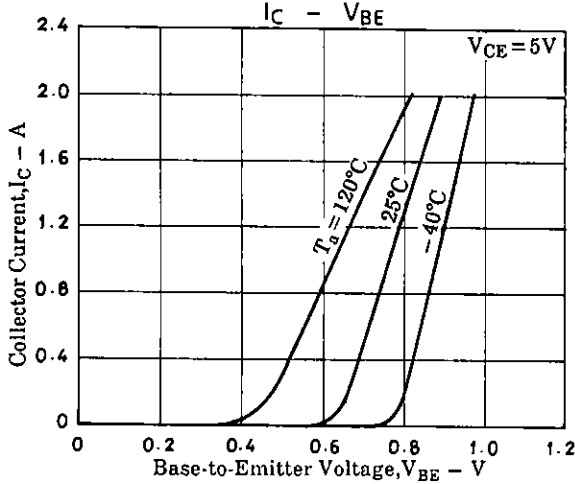
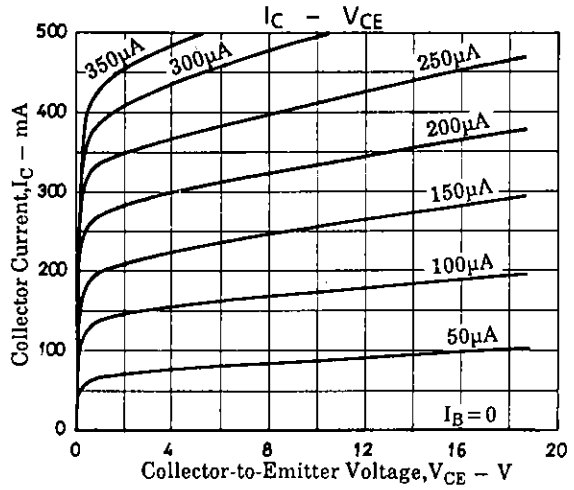
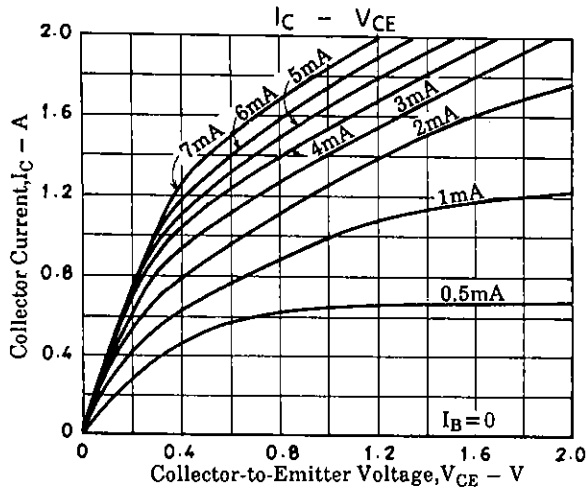
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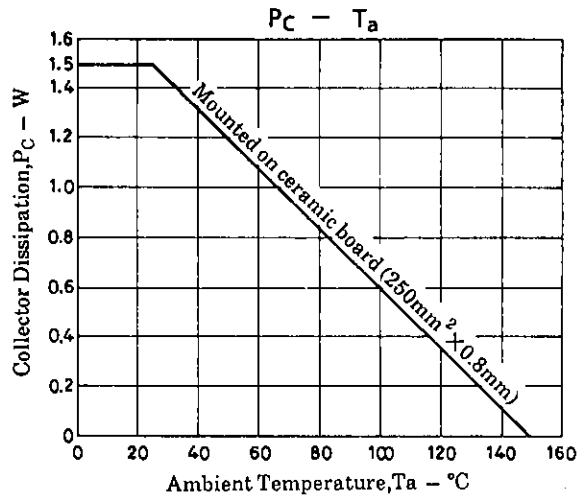
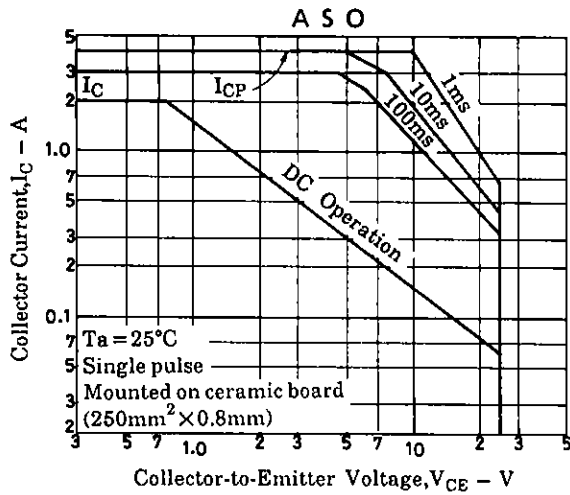
**Switching Time Test Circuit****Package Dimensions 2038A**

(unit: mm)

SANYO:PCP  
(Bottom View)

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