

**SANYO**

No.2923

**2SC4413**

NPN Epitaxial Planar Silicon Transistor

Low-Frequency  
General-Purpose Amp Applications**Features**

- Very small-sized package permitting the 2SC4413-applied sets to be made small and slim
- Adoption of FBET process
- High DC current gain
- Low collector to emitter saturation voltage
- High  $V_{EBO}$
- Small  $c_{ob}$

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

			unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	15	V
Collector Current	$I_C$	100	mA
Collector Current(Pulse)	$I_{CP}$	200	mA
Base Current	$I_B$	20	mA
Collector Dissipation	$P_C$	150	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

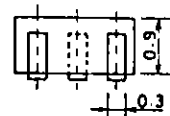
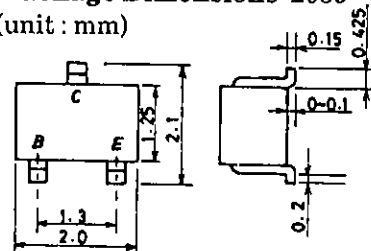
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 40\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 10\text{V}, I_C = 0$			0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$	800	1500	3200	
Gain-Bandwidth Product	$f_T$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$		200		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		1.5		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 1\text{mA}$		0.1	0.5	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 1\text{mA}$		0.8	1.1	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	15			V

Marking : GY

**Package Dimensions 2059**

(unit : mm)

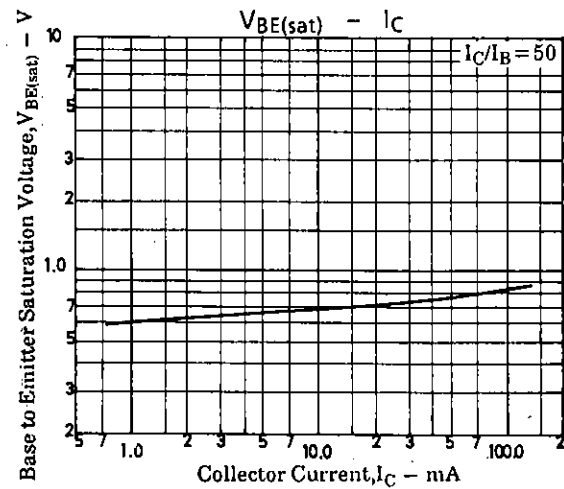
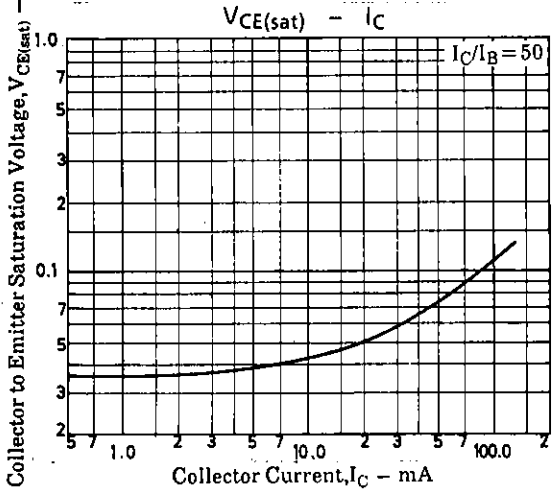
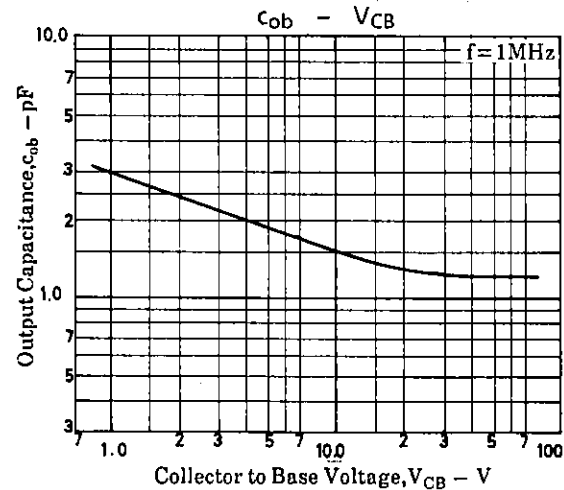
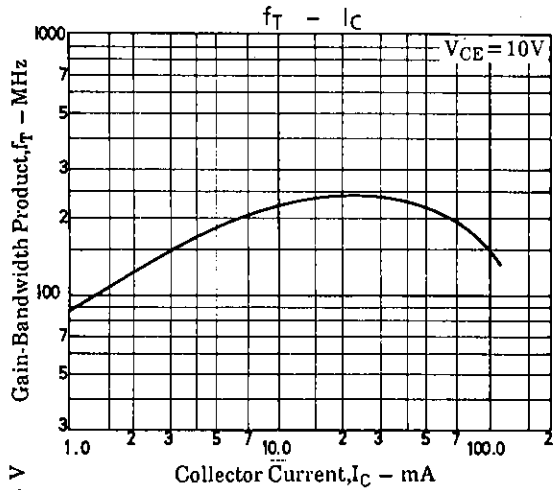
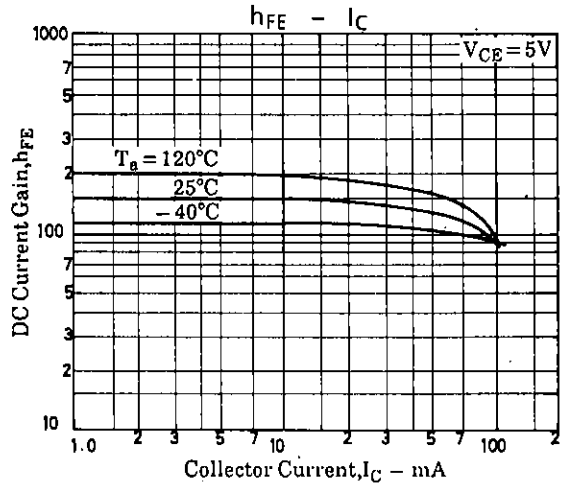
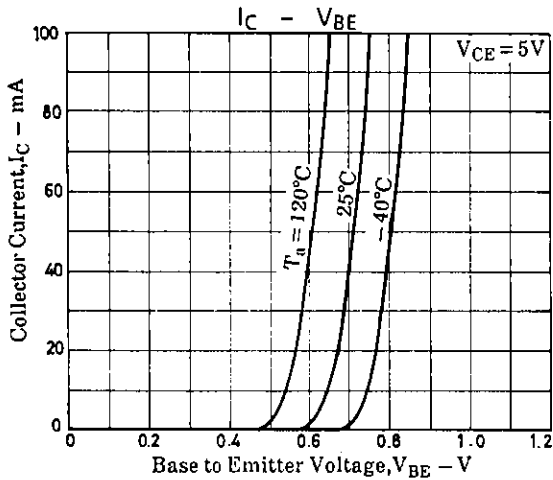
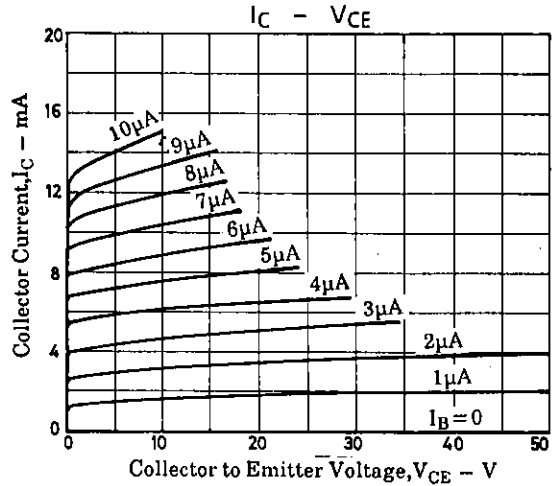
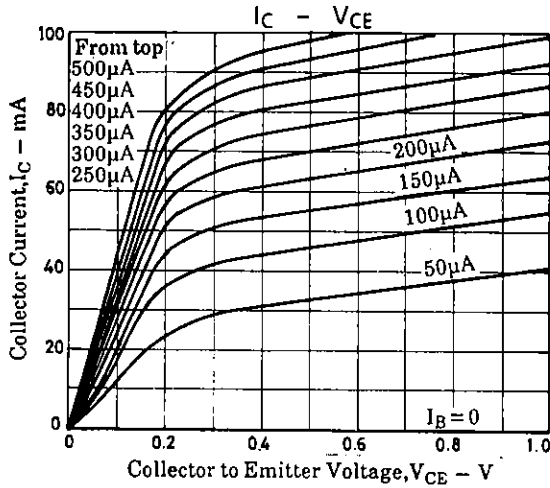


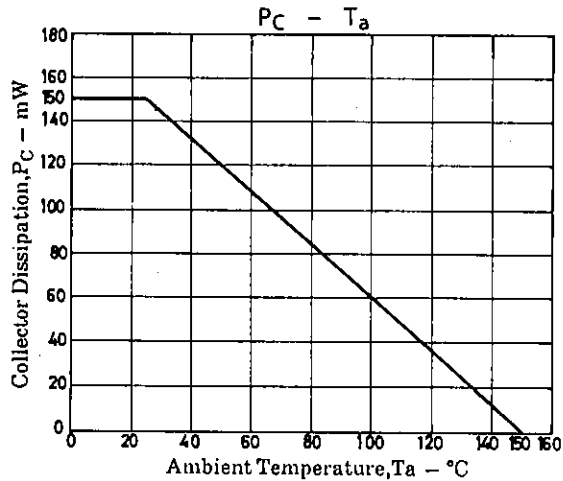
SANYO : MOP

B : Base  
C : Collector  
E : Emitter

**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN





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