

SANYO Semiconductors DATA SHEET

2SC6043 — NPN Epitaxial Planar Silicon Transistors

High-Current Switching Applications

Applications

· Voltage regulators, relay drivers, lamp drivers, electrical equipment.

Features

- · Adoption of MBIT process.
- · High current capacitance.
- · Low collector-to-emitter saturation voltage.
- · High-speed switching.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		80	V
Collector-to-Emitter Voltage	VCES		80	V
Collector-to-Emitter Voltage	VCEO		50	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		2	Α
Collector Current (Pulse)	ICP		4	А
Base Current	ΙΒ		400	mA
Collector Dissipation	PC		1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			11.7
			min	typ	max	Unit
Collector Cutoff Current	ICBO	V _{CB} =40V, I _E =0A			1	μΑ
Emitter Cutoff Current	IEBO	VEB=4V, IC=0A			1	μΑ
DC Current Gain	hFE1	VCE=2V, IC=100mA	200		560	
	hFE2	V _{CE} =2V, I _C =1.5A	40			
Gain-Bandwidth Product	fŢ	VCE=10V, IC=300mA		420		MHz
Output Capacitance	Cob	V _{CB} =10V, f=1MHz		9		pF

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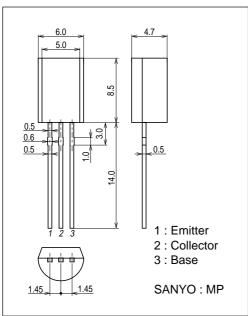
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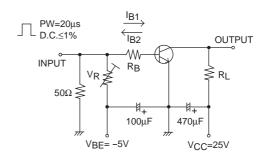
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Offic
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC=1A, IB=50mA		150	300	mV
Base-to-Emitter Saturation Voltage	V _{BE} (sat)	I _C =1A, I _B =50mA		0.94	1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	IC=10μA, IE=0A	80			V
Collector-to-Emitter Breakdown Voltage	V(BR)CES	IC=100μA, RBE=0Ω	80			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	IC=1mA, RBE=∞	50			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	IE=10μΑ, IC=0A	6			V
Turn-ON Time	ton	See specified Test Circuit.		35		ns
Storage Time	tstg	See specified Test Circuit.		330		ns
Fall Time	tf	See specified Test Circuit.		40		ns

Package Dimensions

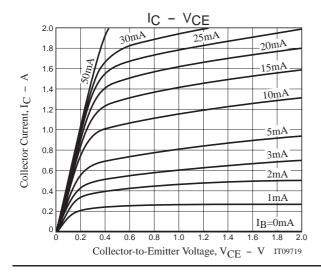
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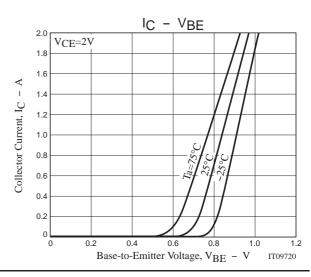


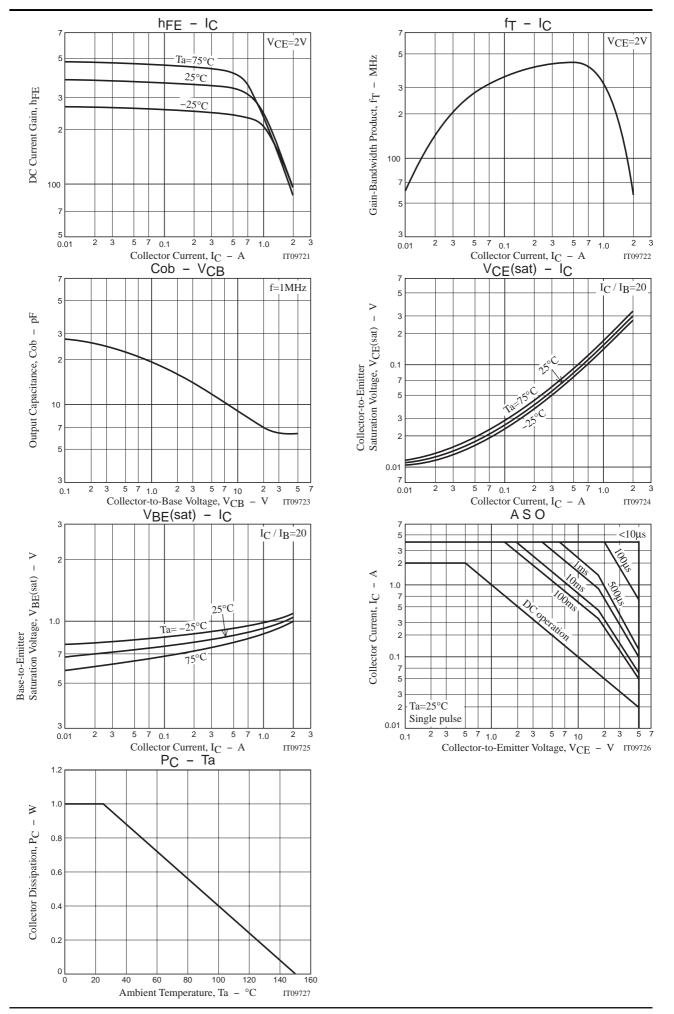
Switching Time Test Circuit



$$I_{C}=10I_{B1}=-10I_{B2}=700mA$$







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