



MCH6124

 — PNP Epitaxial Planar Silicon Transistor

Load Switch Applications

Applications

- Load switch, DC-DC converter, motor drivers, charger.

Features

- Adoption of MBIT process.
- High current capacitance.
- Low collector-to-emitter saturation voltage.
- High speed switching.
- Ultrasmall-sized package permitting applied sets to be made small and slim (0.85mm).
- High allowable power dissipation.
- IECO is guaranteed for preventing reverse flow from the collector to the emitter.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		-20	V
Collector-to-Emitter Voltage	VCEO		-20	V
Emitter-to-Base Voltage	VEBO		-5	V
Collector Current	IC		-3	A
Collector Current (Pulse)	ICP		-5	A
Base Current	IB		-600	mA
Collector Dissipation	PC	When mounted on ceramic substrate (600mm ² ×0.8mm)	1	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Marking : BA

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MCH6124

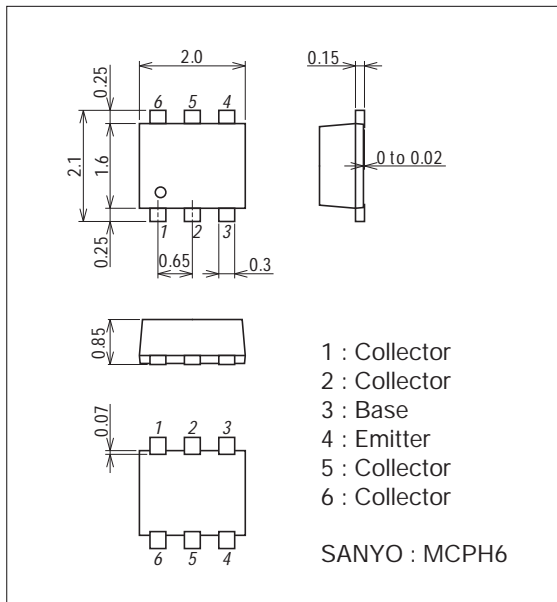
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} = -20V, I _E = 0A			-0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = -4V, I _C = 0A			-0.1	μA
Emitter Cutoff Current	I _{ECO}	V _{EC} = -4.5V, I _B = 0A			-1	μA
DC Current Gain	h _{FE}	V _{CE} = -2V, I _C = -100mA	200		560	
Gain-Bandwidth Product	f _T	V _{CE} = -10V, I _C = -300mA		400		MHz
Output Capacitance	C _{ob}	V _{CB} = -10V, f = 1MHz		22		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C = -1.5A, I _B = -75mA		-130	-195	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C = -1.5A, I _B = -75mA		-0.93	-1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C = -10μA, I _E = 0A	-20			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = -1mA, R _{BE} = ∞	-20			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E = -10μA, I _C = 0A	-5			V
Turn-On Time	t _{on}	See specified Test Circuit.		35		ns
Storage Time	t _{stg}	See specified Test Circuit.		65		ns
Fall Time	t _f	See specified Test Circuit.		12		ns

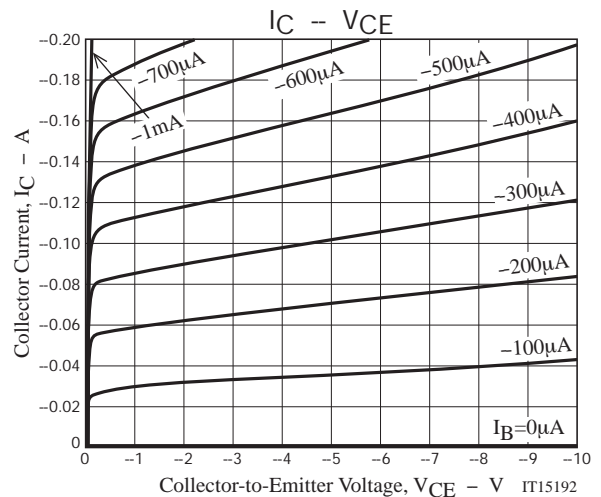
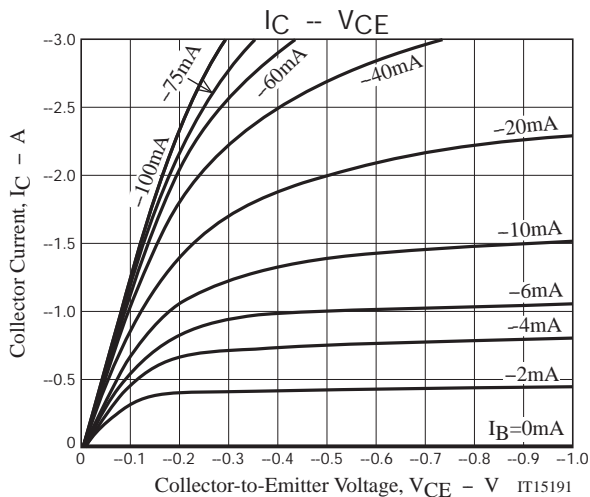
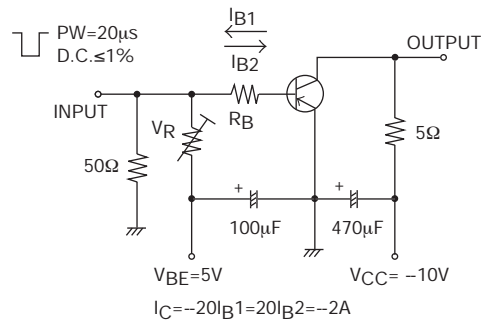
Package Dimensions

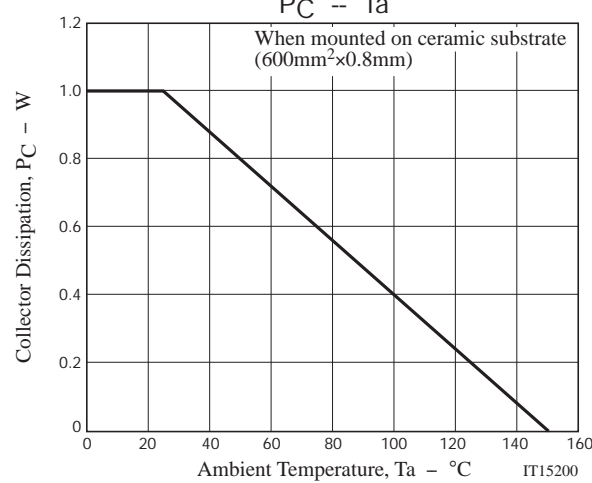
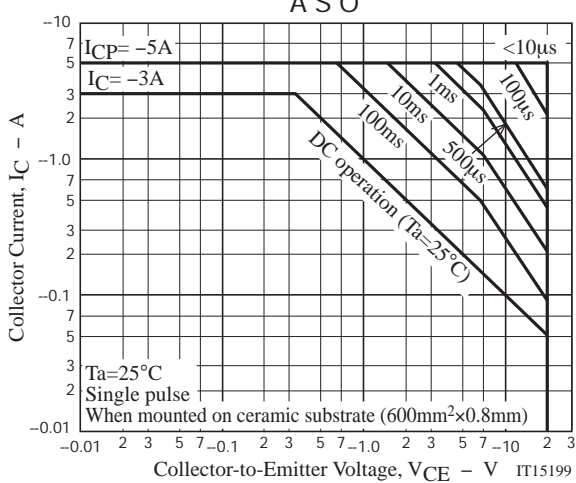
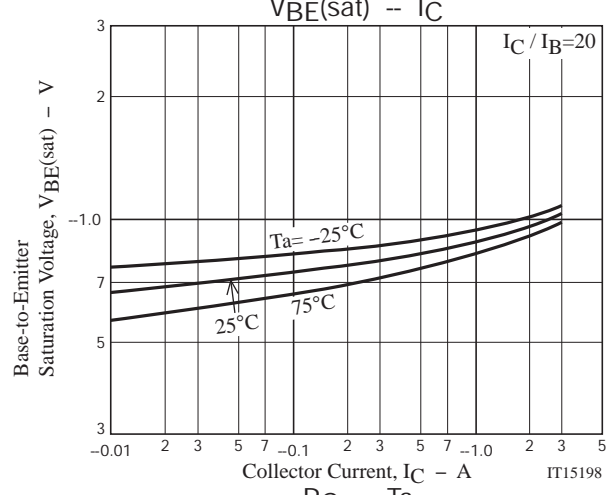
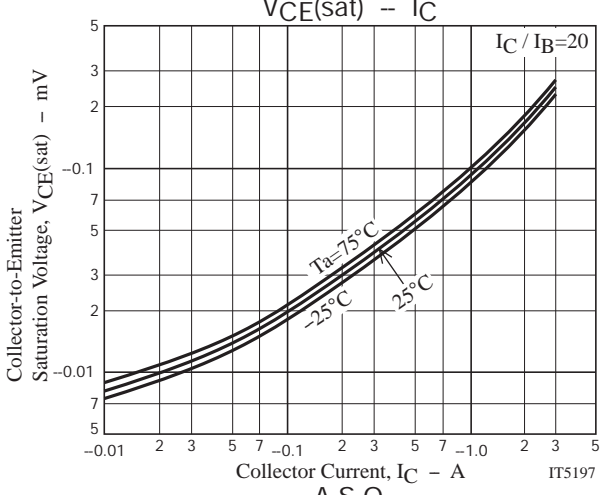
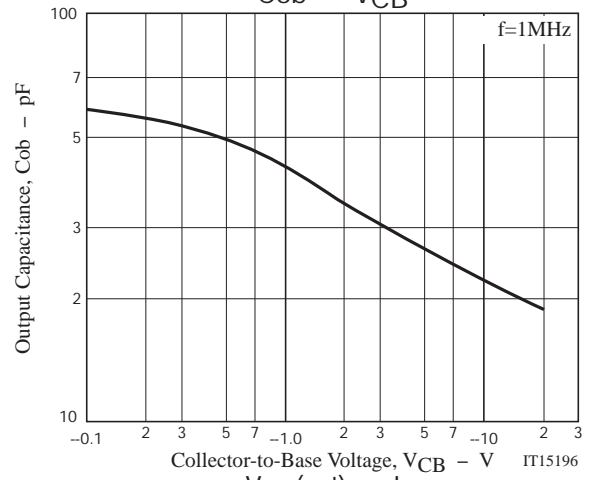
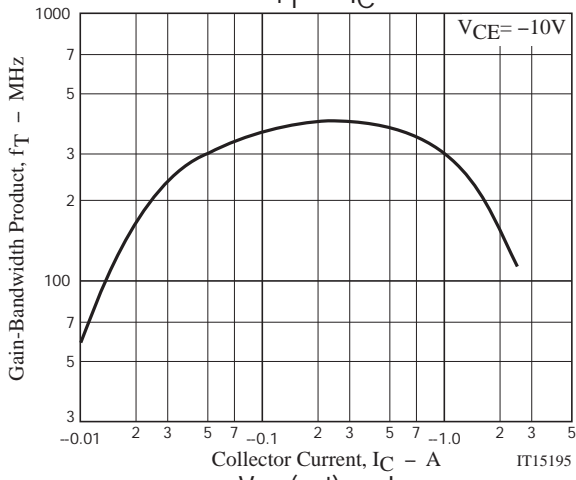
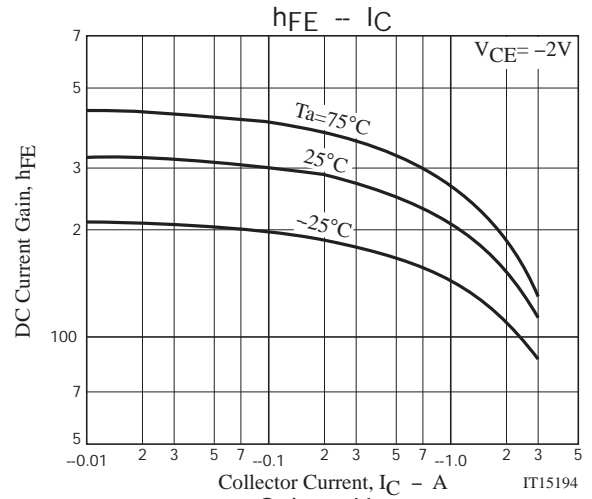
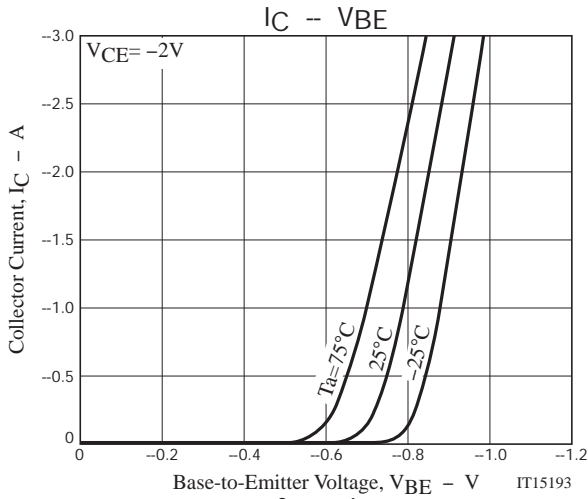
unit : mm (typ)

7022A-007



Switching Time Test Circuit





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