



MCH6542

PNP / NPN Epitaxial Planar Silicon Transistors

Push-Pull Circuit Applications

Applications

- MOSFET gate drivers, relay drivers, lamp drivers, motor drivers.

Features

- Composite type with a PNP transistor and an NPN transistor contained in one package facilitating high-density mounting.
- Ultrasmall package permitting applied sets to be small and slim.

Specifications () : PNP

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-30)40	V
Collector-to-Emitter Voltage	V _{CEO}		(-)30	V
Emitter-to-Base Voltage	V _{EBO}		(-)5	V
Collector Current	I _C		(-)300	mA
Collector Current (Pulse)	I _{CP}		(-)900	mA
Collector Dissipation	P _C	Mounted on a ceramic board (600mm ² ×0.8mm) 1unit	0.5	W
Total Power Dissipation	P _T	Mounted on a ceramic board (600mm ² ×0.8mm)	0.55	W
Junction Temperature	T _J		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)30V, I _E =0A			(-)100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0A			(-)100	nA
DC Current Gain	h _{FE}	V _{CE} =(-)2V, I _C =(-)10mA	(200)300		(500)800	
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		(520)380		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(3)2.4		pF

Marking : EQ

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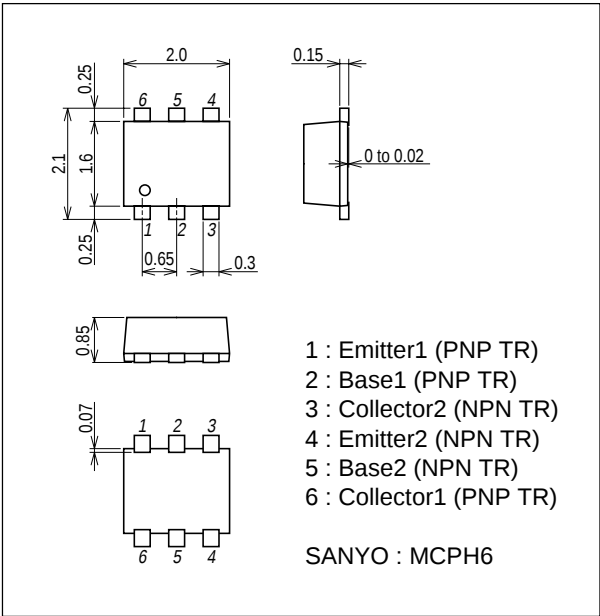
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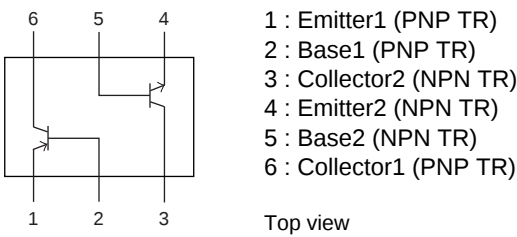
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)100mA, I_B=(-)5mA$		$(-110)100$	$(-220)200$	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)100mA, I_B=(-)5mA$		$(-)0.9$	$(-)1.2$	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	$(-30)40$			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	$(-)30$			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0A$	$(-)5$			V
Turn-On Time	t_{on}	See specified Test Circuit.		$(39)42$		ns
Storage Time	t_{stg}	See specified Test Circuit.		$(200)135$		ns
Fall Time	t_f	See specified Test Circuit.		$(48)90$		ns

Package Dimensions

unit : mm (typ)
7022A-012

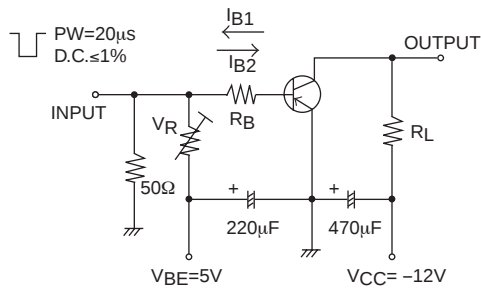


Electrical Connection

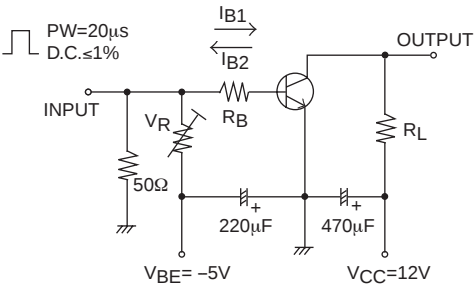


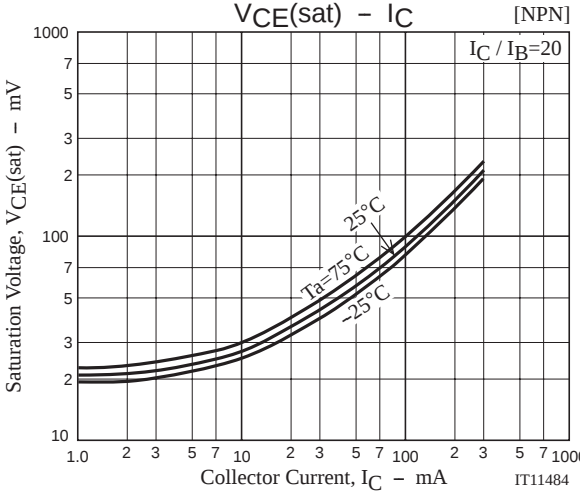
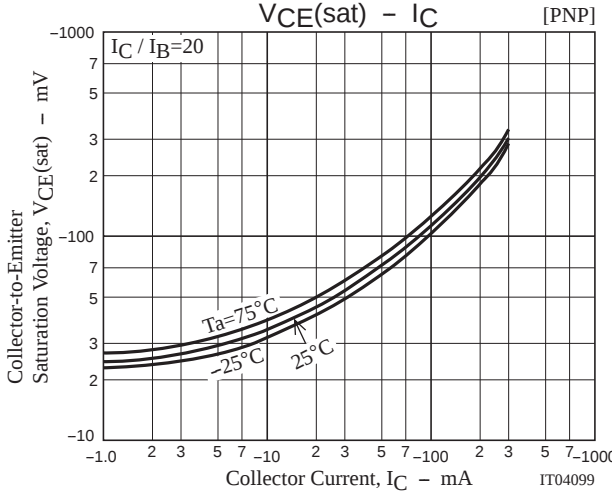
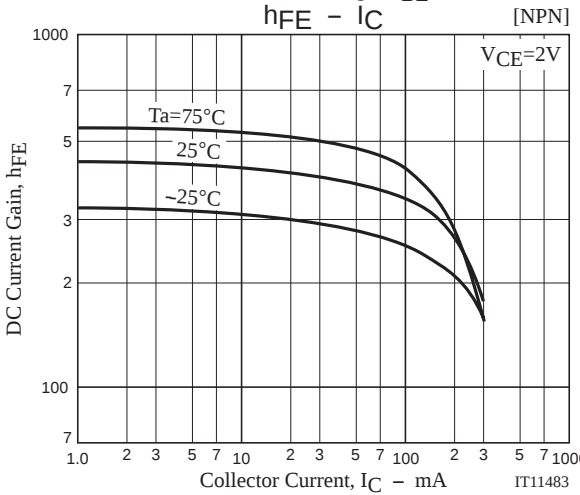
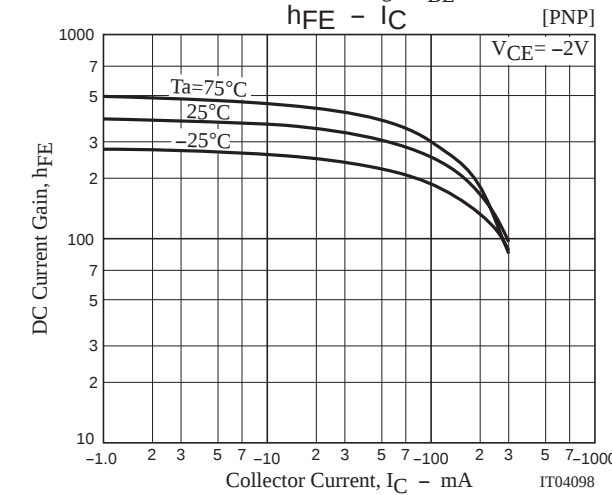
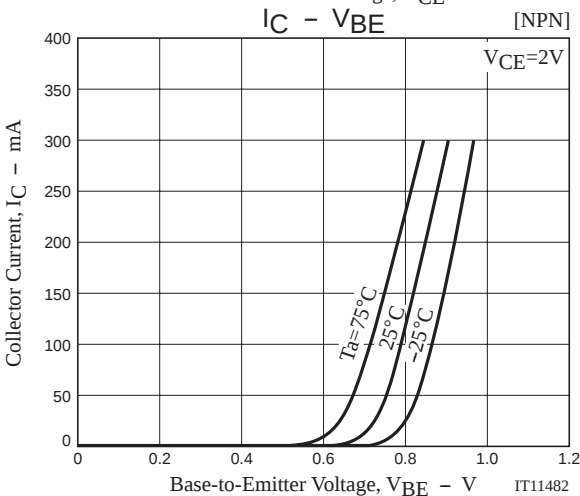
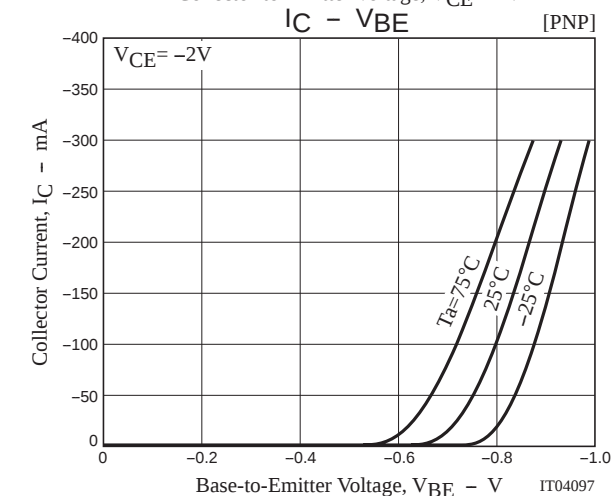
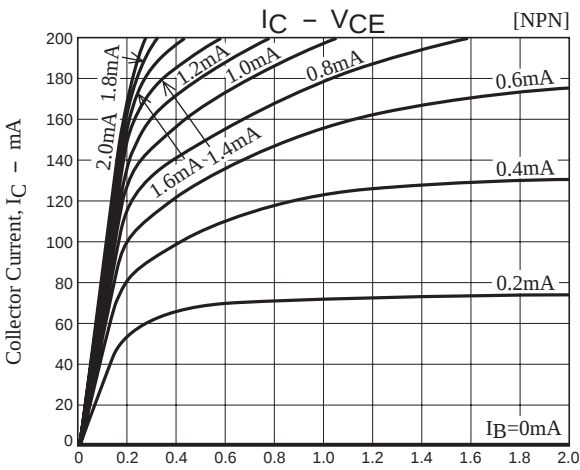
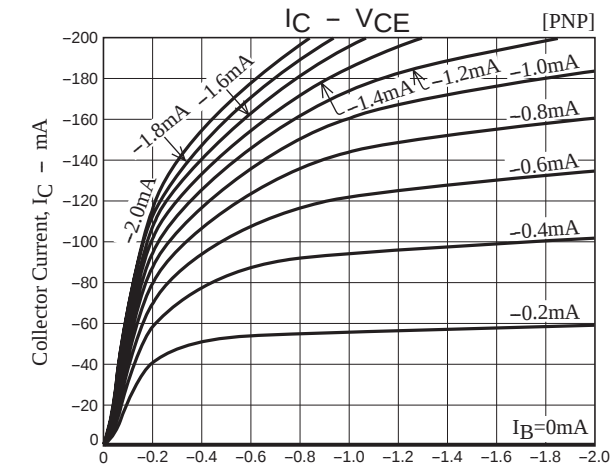
Switching Time Test Circuit

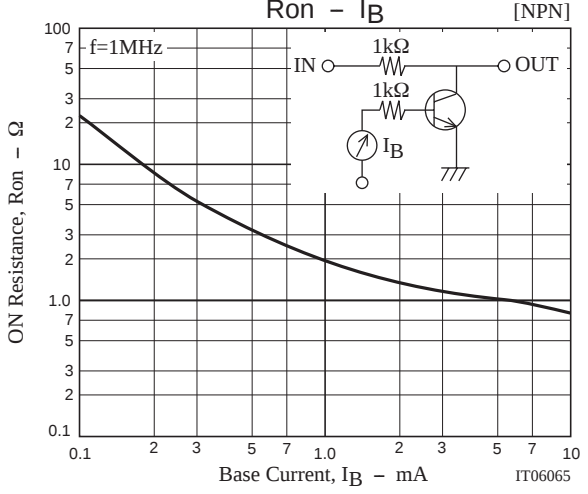
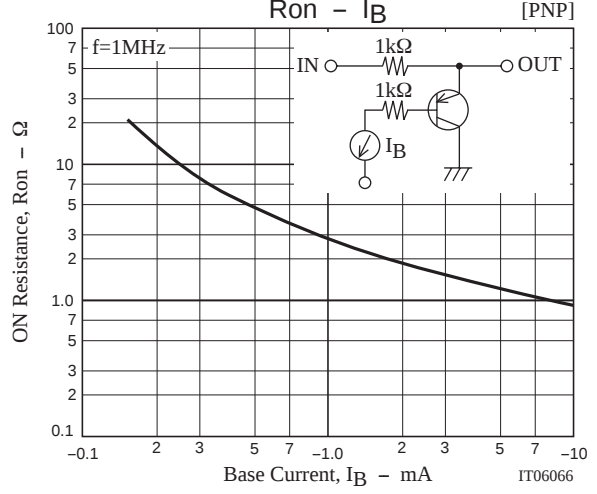
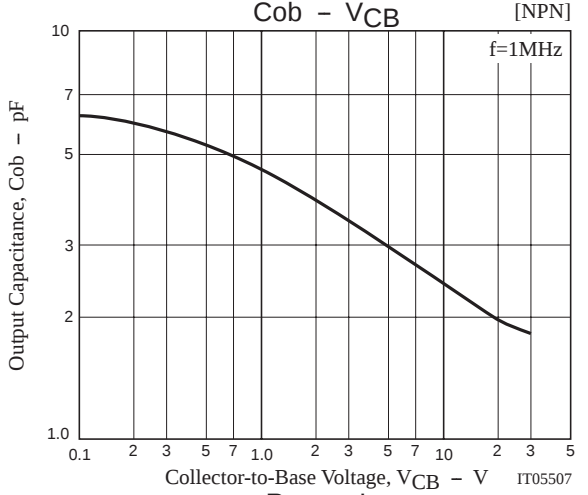
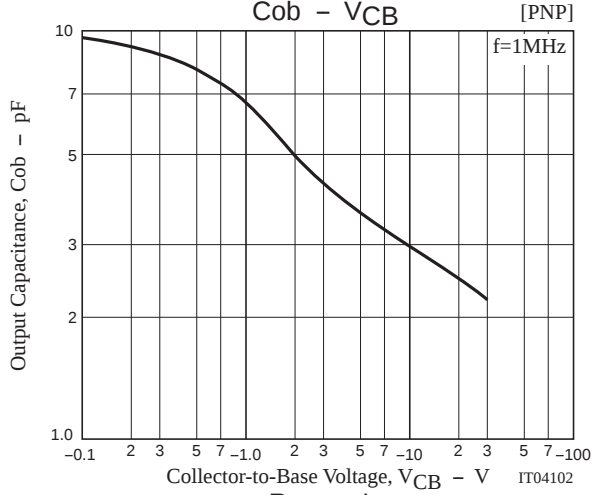
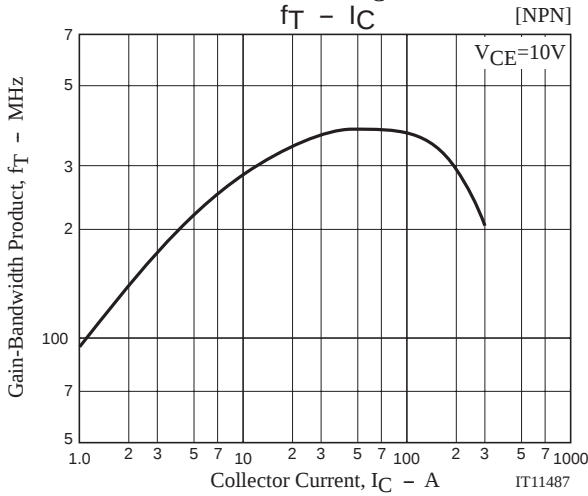
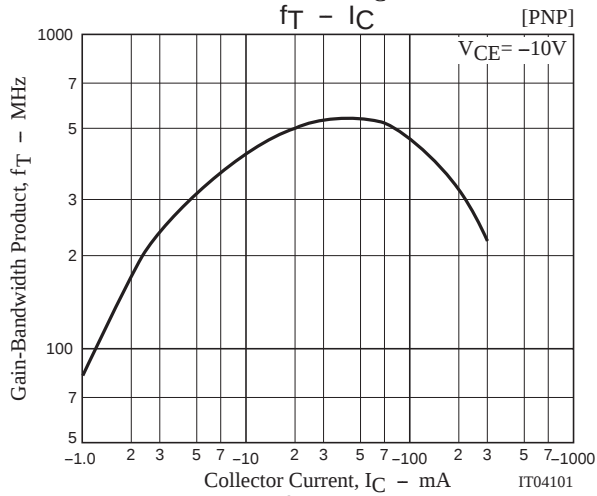
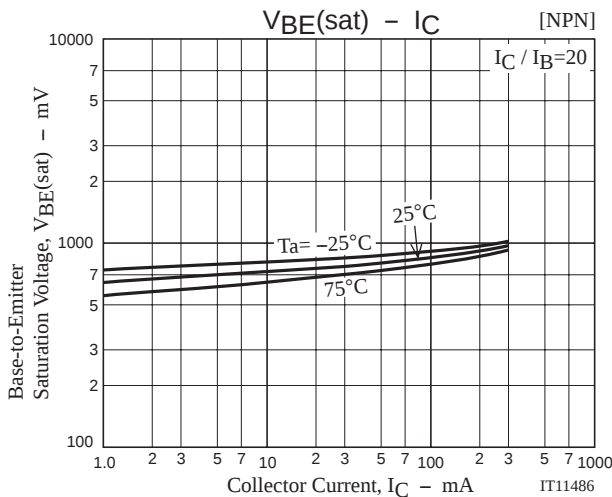
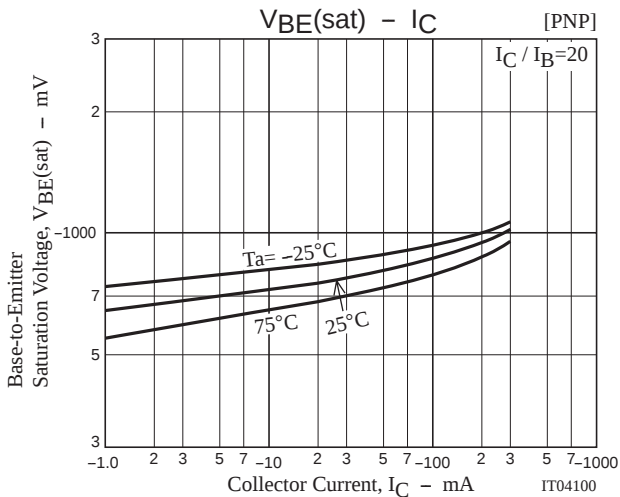
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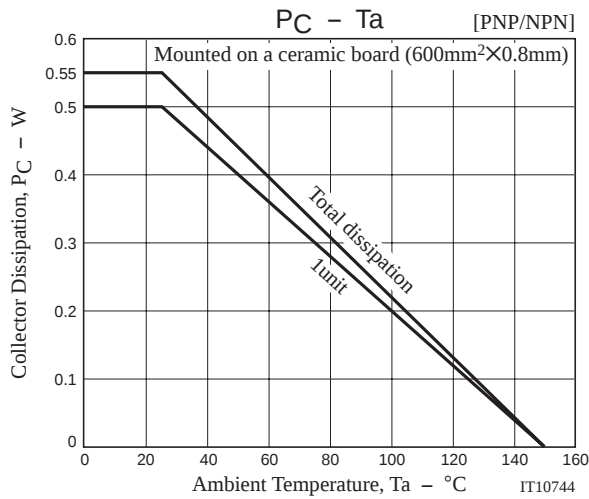


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