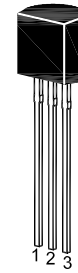


MPSA05 / 06

NPN Silicon Epitaxial Planar Transistor

for amplifier applications

On special request, these transistors can be manufactured in different pin configurations.



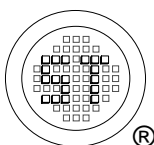
1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	MPSA05 MPSA06 V_{CBO}	60 80	V
Collector Emitter Voltage	MPSA05 MPSA06 V_{CEO}	60 80	V
Emitter Base Voltage	V_{EBO}	4	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain	h_{FE}	100	-	-
at $V_{CE} = 1\text{ V}$, $I_C = 10\text{ mA}$	h_{FE}	100	-	-
at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$	h_{FE}	100	-	-
Collector Base Cutoff Current	I_{CBO}	-	100	nA
at $V_{CB} = 60\text{ V}$	MPSA05	-	100	nA
at $V_{CB} = 80\text{ V}$	MPSA06	-	100	nA
Collector Emitter Cutoff Current	I_{CES}	-	100	nA
at $V_{CE} = 60\text{ V}$				
Collector Emitter Breakdown Voltage	$V_{(BR)CEO}$	60	-	V
at $I_C = 1\text{ mA}$	MPSA05	60	-	V
	MPSA06	80	-	V
Emitter Base Breakdown Voltage	$V_{(BR)EBO}$	4	-	V
at $I_E = 100\text{ }\mu\text{A}$				
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	-	0.25	V
at $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$				
Base Emitter On Voltage	$V_{BE(on)}$	-	1.2	V
at $I_C = 100\text{ mA}$, $V_{CE} = 1\text{ V}$				
Transition Frequency	f_T	100	-	MHz
at $I_C = 10\text{ mA}$, $V_{CE} = 2\text{ V}$, $f = 100\text{ MHz}$				

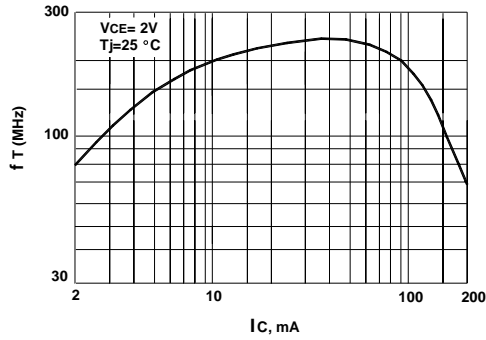


SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited

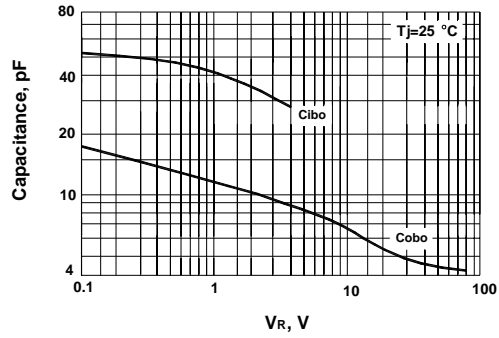


Dated : 03/12/2004

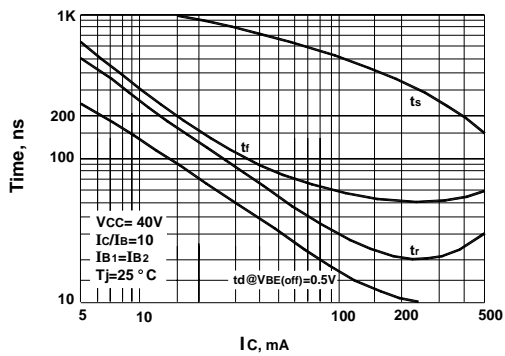
Current gain - bandwidth product



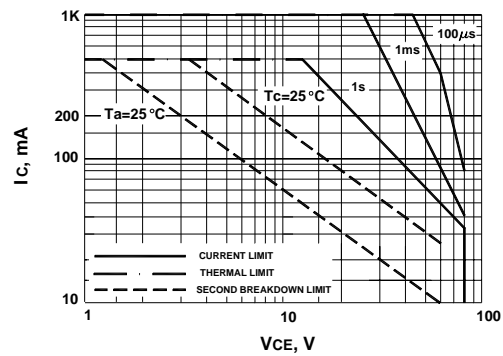
Capacitance



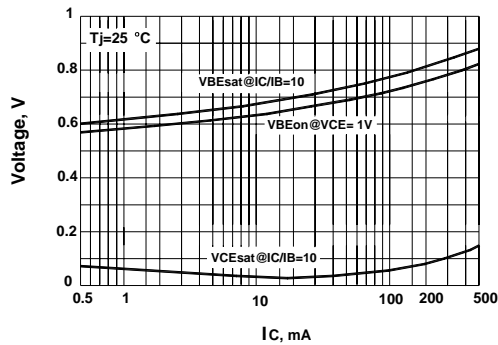
Switching Time



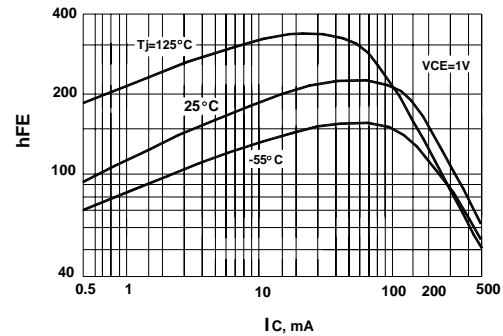
Active-region safe operating area



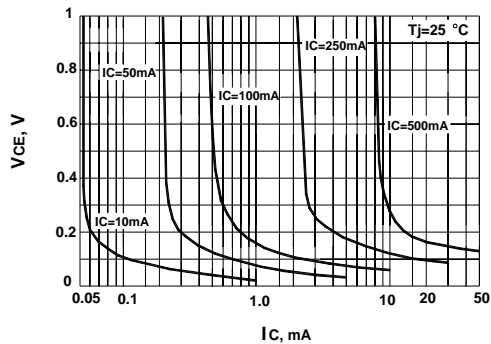
"ON" voltages



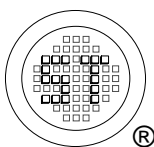
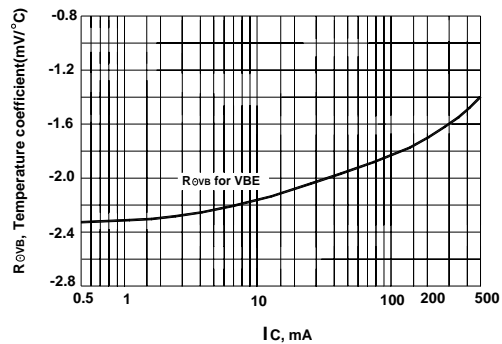
DC current gain



Collector saturation region



Base emitter temperature coefficient



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited

