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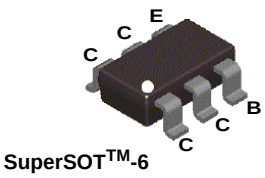
FAIRCHILD SEMICONDUCTOR®

April 2011

FMBS2383
NPN Epitaxial Silicon Transistor

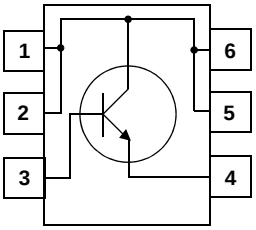
Features

- Power Amplifier
- Collector-Emitter Voltage : V_{CEO}=160V
- Current Gain Bandwidth Product : f_T=120MHz



SuperSOT™-6

Marking : 2383



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	800	mA
I_B	Base Current	160	mA
P_D	Power Dissipation	630	mW
$R_{\theta JA}$*	Thermal Resistance, Junction to Ambient	200	°C/W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

* note1) : Minimum land pattern size

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 10μA, I_B = 0	160			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	160			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 1mA, I_C = 0	5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 120V, I_E = 0			100	nA
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V, I_C = 0			100	nA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 100mA	80		160	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C = 500mA, I_B = 50mA			1.0	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 500mA			1.0	V
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 100mA		120		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, I_E = 0, f = 1MHz			30	pF

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Typical Performance Characteristics

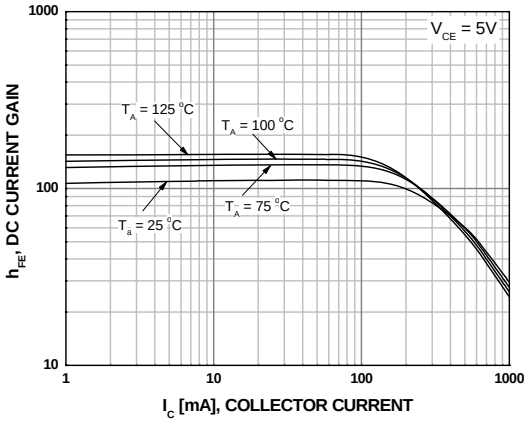


Figure 1. DC Current Gain

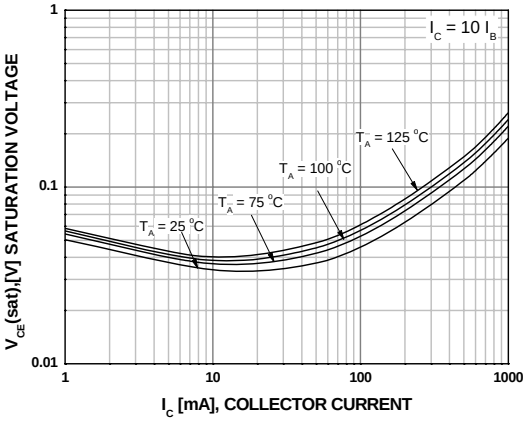


Figure 2. Collector-Emitter Saturation Voltage

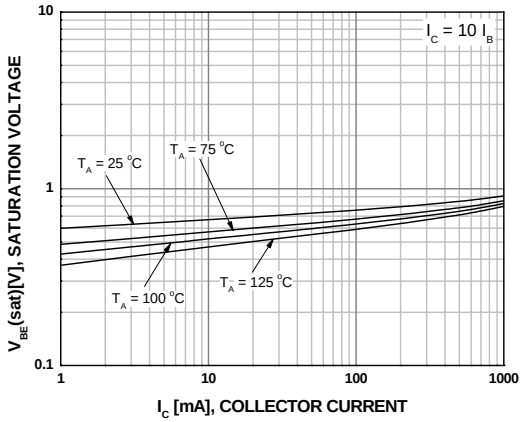


Figure 3. Base-Emitter Saturation Voltage

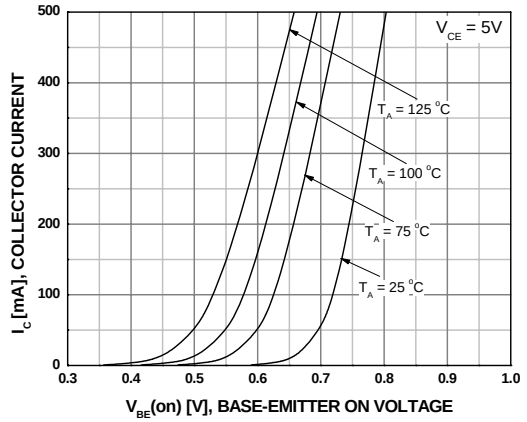


Figure 4. Base-Emitter On Voltage

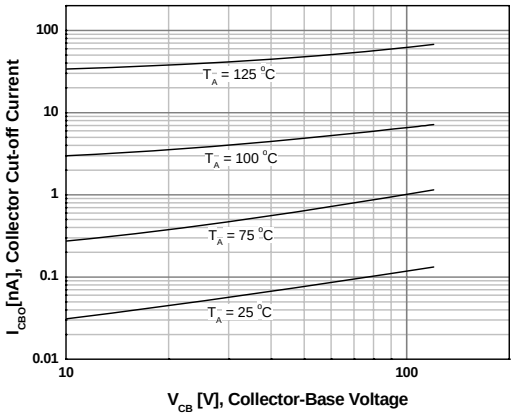


Figure 5. Collector-Base Cutoff Current

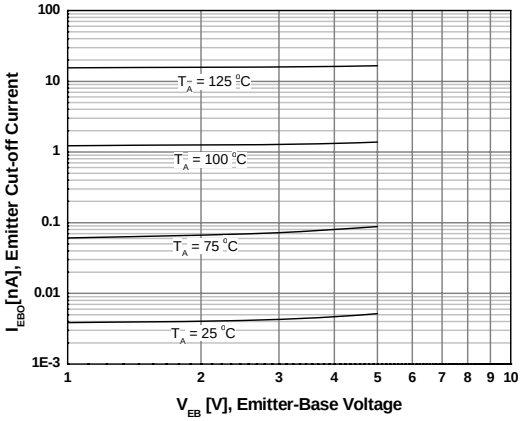


Figure 6. Emitter-Base Cutoff Current

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Typical Performance Characteristics (Continued)

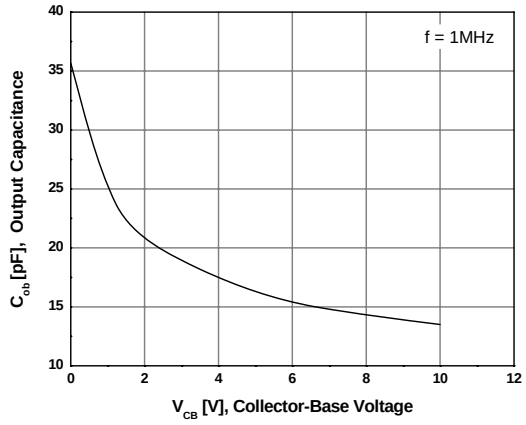


Figure 7. Output Capacitance

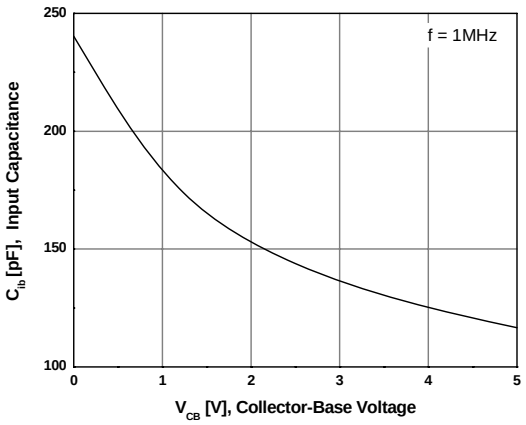


Figure 8. Input Capacitance

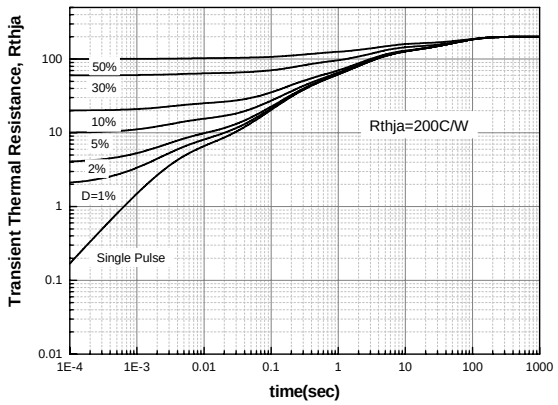
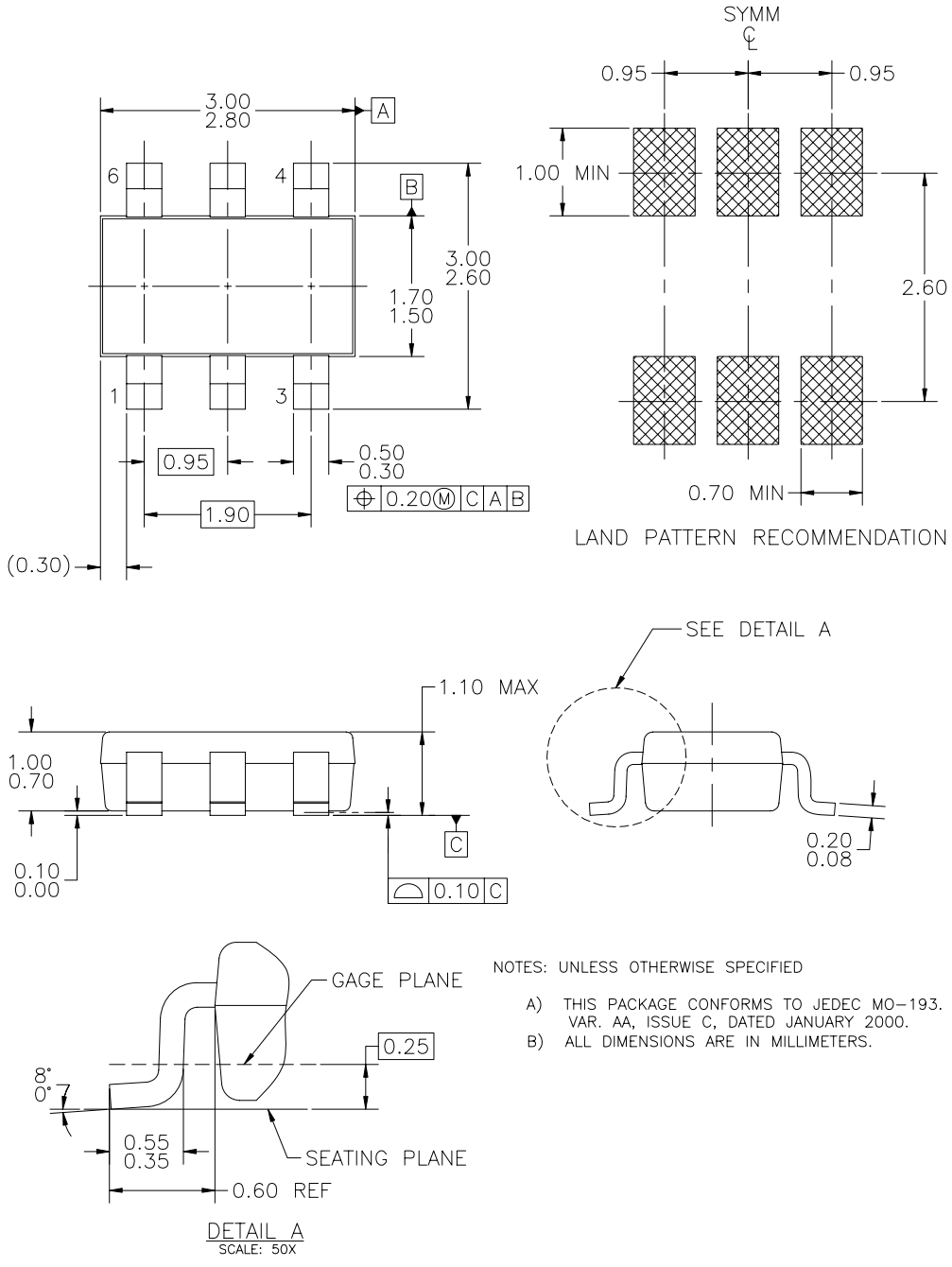


Figure 9. Transient Thermal Resistance

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Physical Dimensions

SuperSOT™-6



NOTES: UNLESS OTHERWISE SPECIFIED

A) THIS PACKAGE CONFORMS TO JEDEC MO-193. VAR. AA, ISSUE C, DATED JANUARY 2000.
B) ALL DIMENSIONS ARE IN MILLIMETERS.

Dimensions in Millimeters

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