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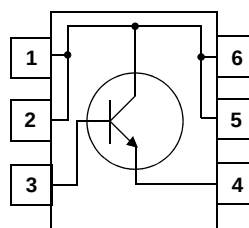
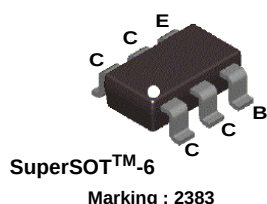
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FMBS2383

NPN Epitaxial Silicon Transistor

Features

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



Absolute Maximum Ratings $T_a = 25^\circ C$ 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	$^\circ C/W$
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

* note1) : Minimum land pattern size

Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 10\mu A, I_B = 0$	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

Typical Performance Characteristics

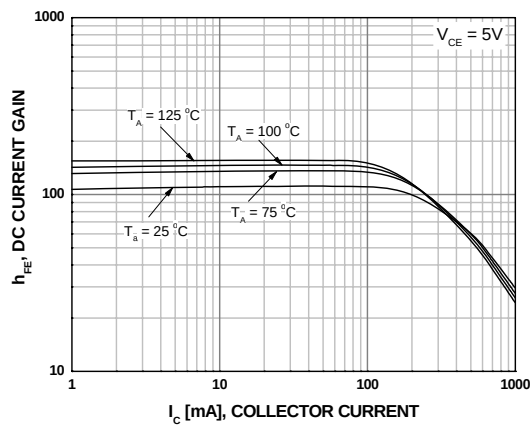


Figure 1. DC Current Gain

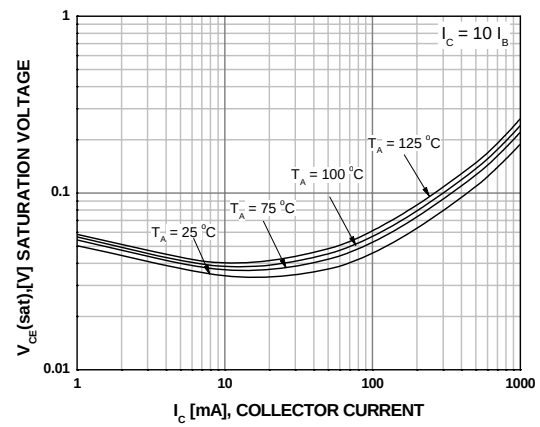


Figure 2. Collector-Emitter Saturation Voltage

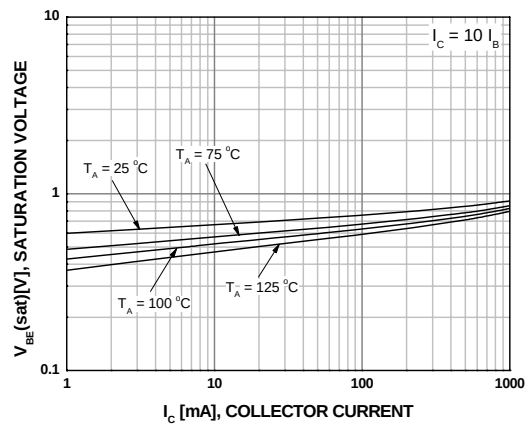


Figure 3. Base-Emitter Saturation Voltage

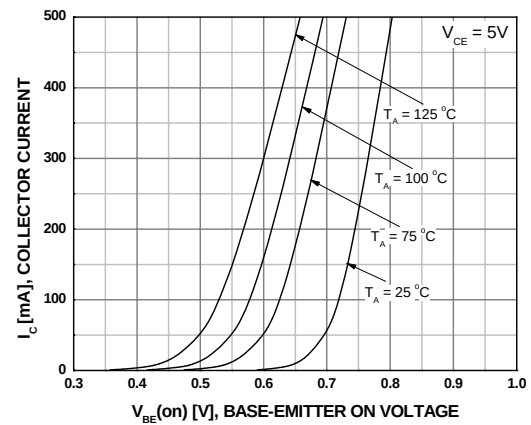


Figure 4. Base-Emitter On Voltage

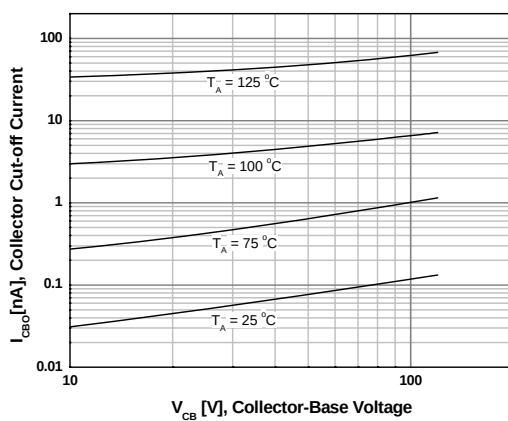


Figure 5. Collector-Base Cutoff Current

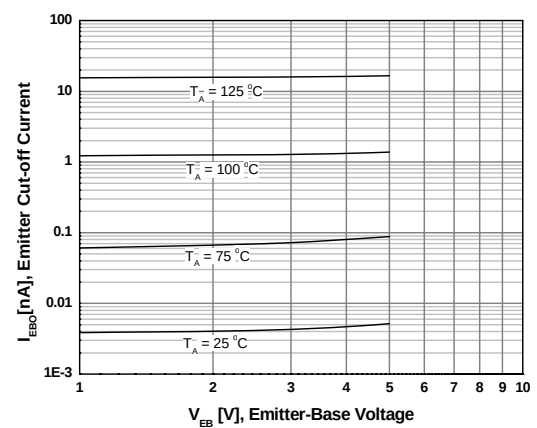


Figure 6. Emitter-Base Cutoff Current

Typical Performance Characteristics (Continued)

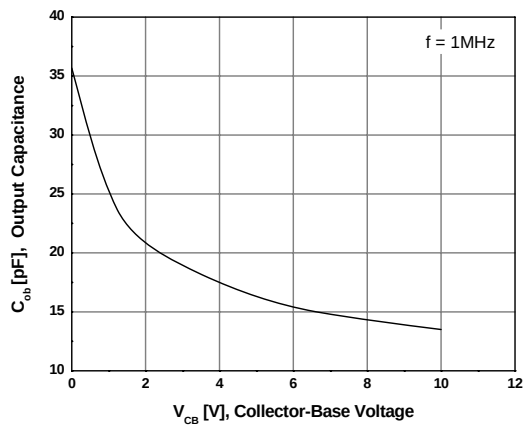


Figure 7. Output Capacitance

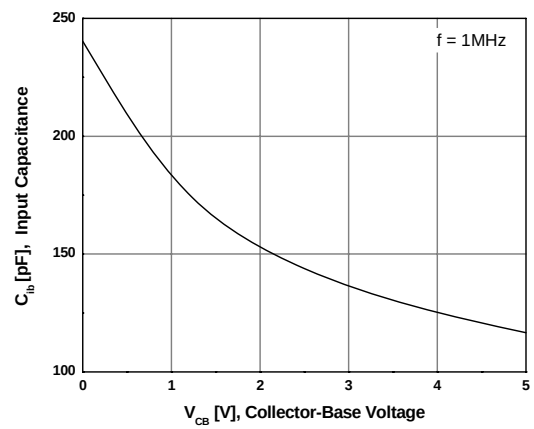


Figure 8. Input Capacitance

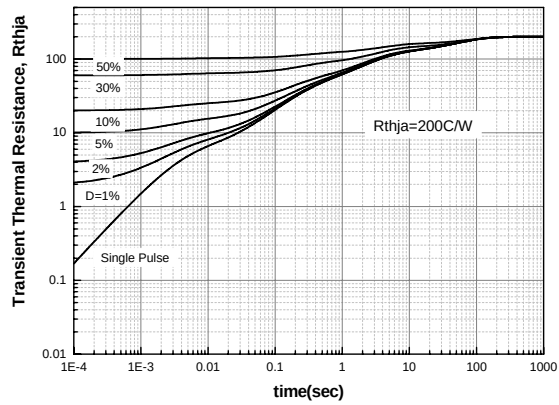
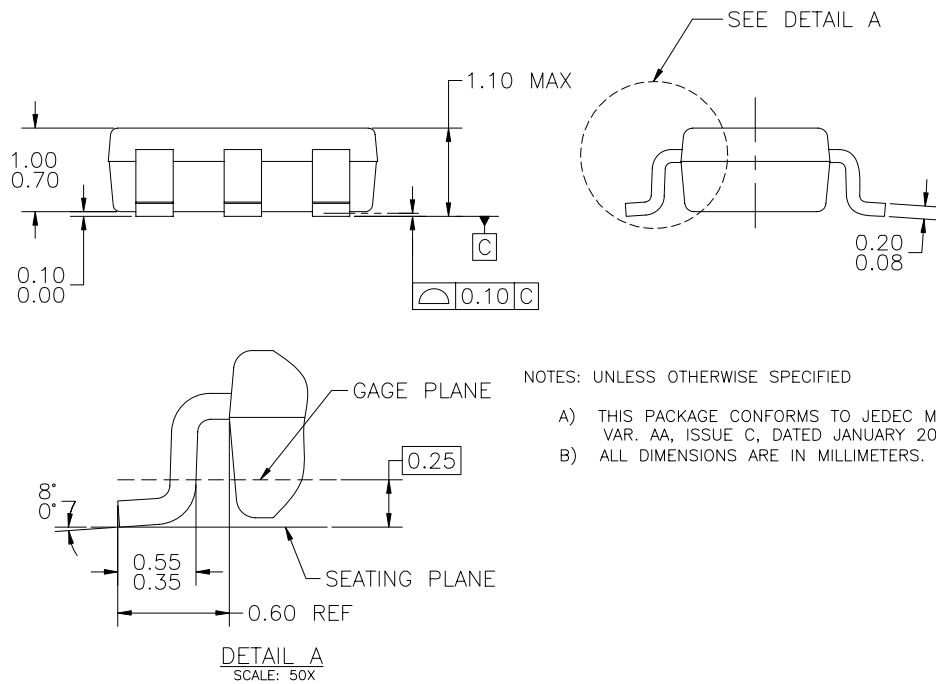
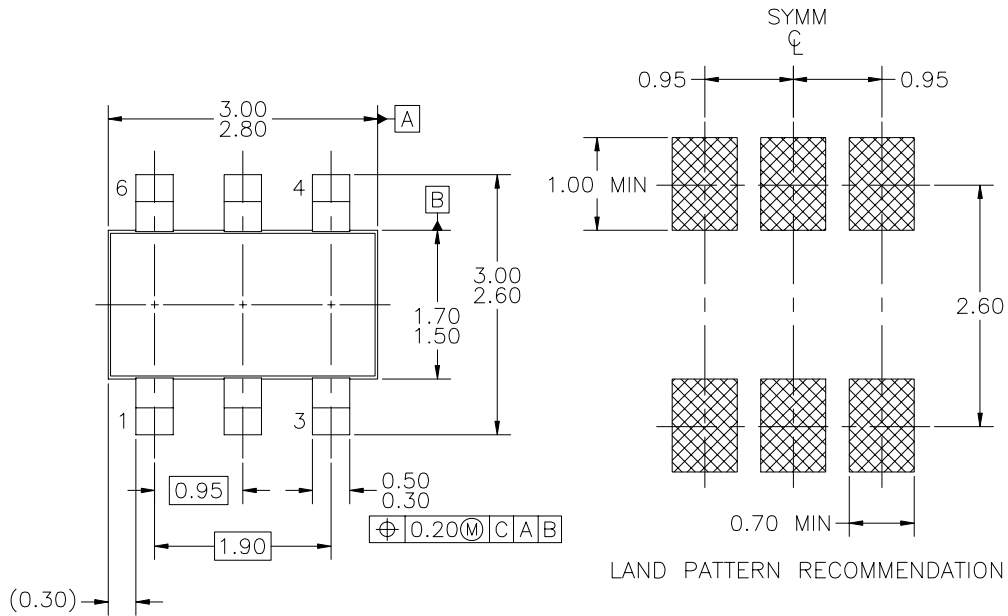


Figure 9. Transient Thermal Resistance

Physical Dimensions

SuperSOT™-6



Dimensions in Millimeters



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