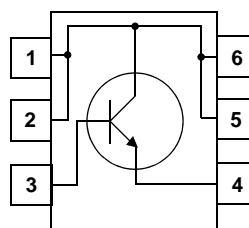
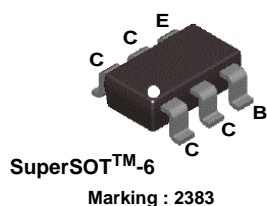


# FMBS2383

## 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

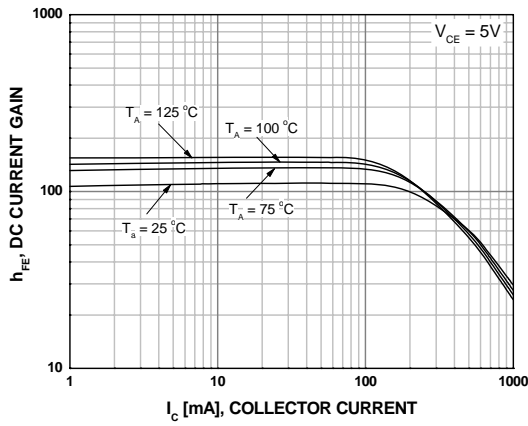


Figure 1. DC Current Gain

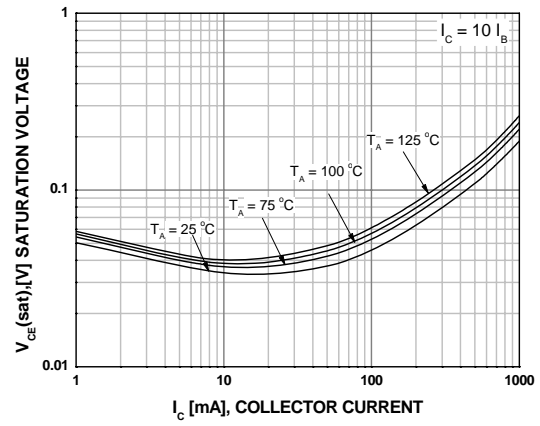


Figure 2. Collector-Emitter Saturation Voltage

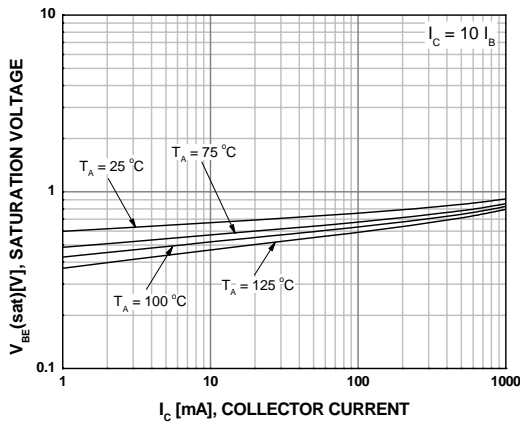


Figure 3. Base-Emitter Saturation Voltage

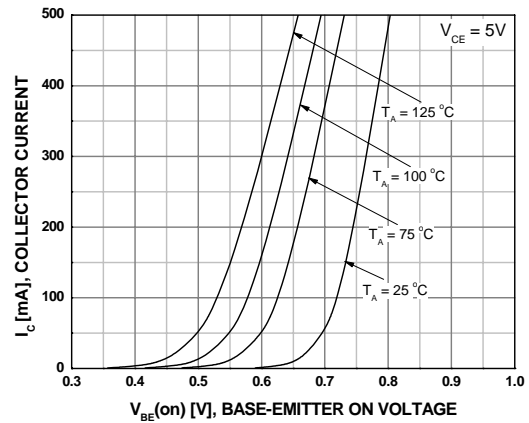


Figure 4. Base-Emitter On Voltage

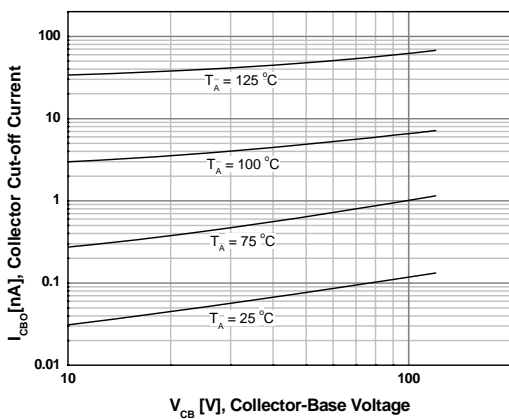


Figure 5. Collector-Base Cutoff Current

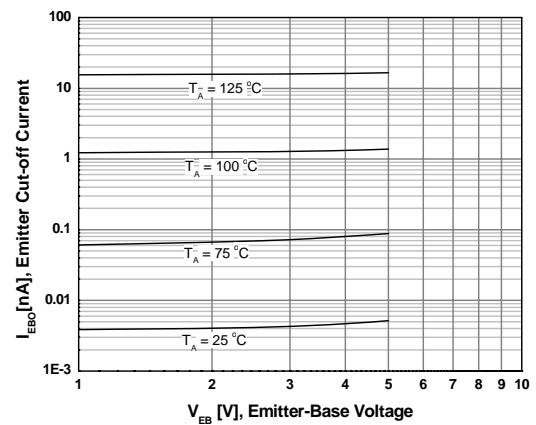
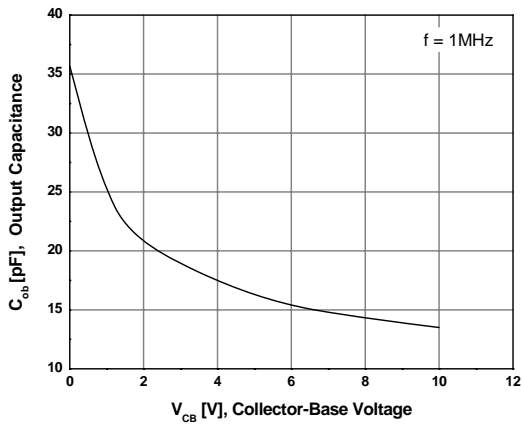
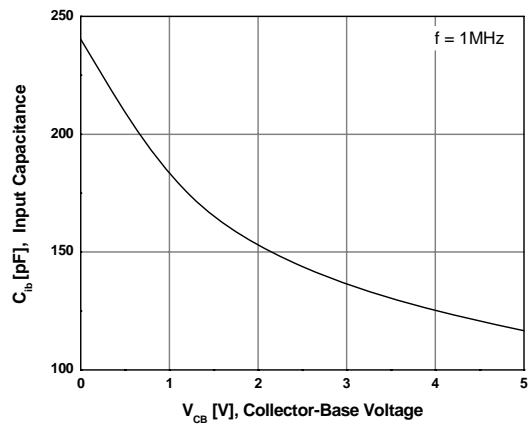


Figure 6. Emitter-Base Cutoff Current

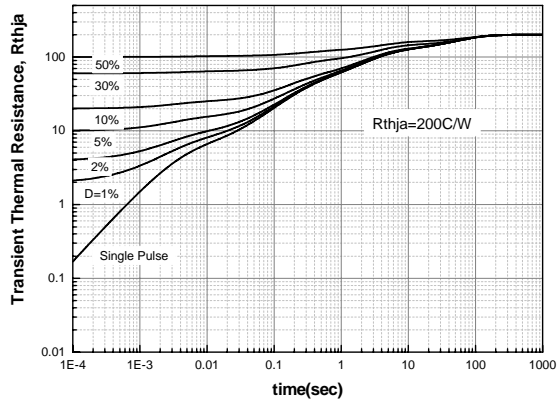
**Typical Performance Characteristics (Continued)**



**Figure 7. Output Capacitance**



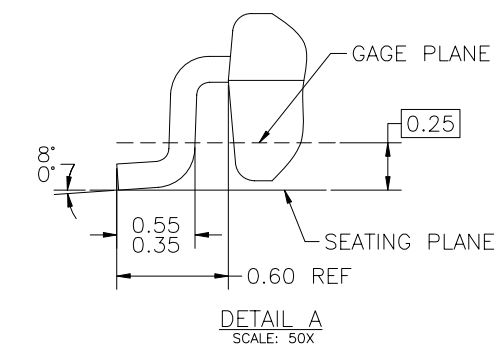
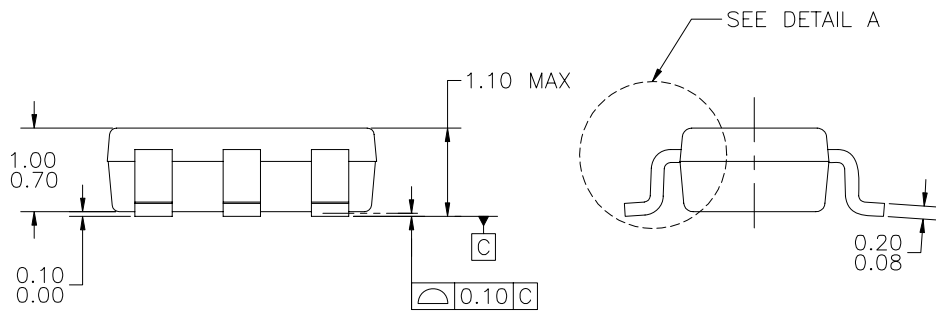
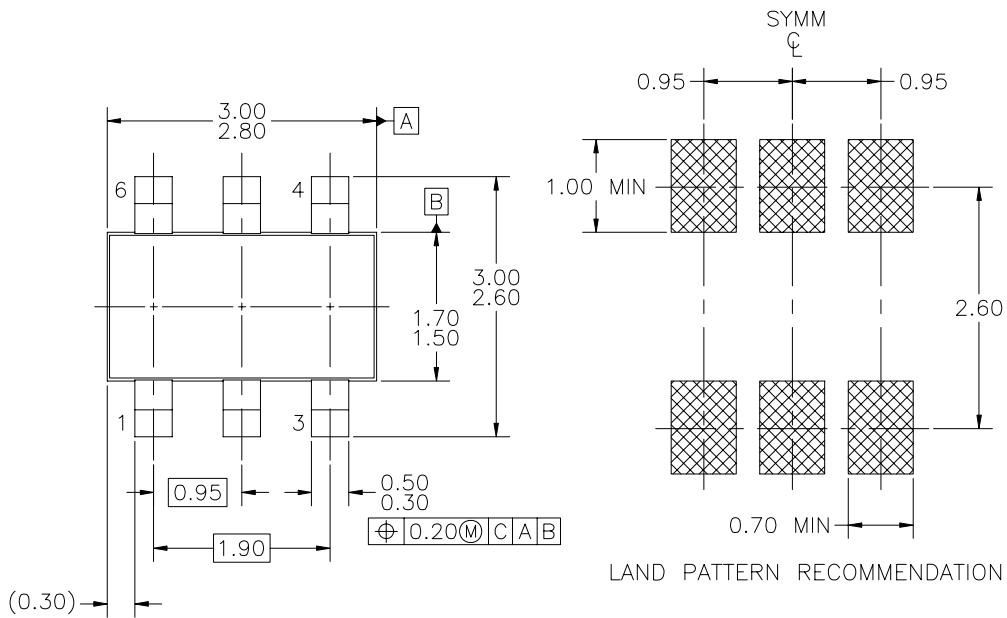
**Figure 8. Input Capacitance**



**Figure 9. Transient Thermal Resistance**

**Physical Dimensions**

**SuperSOT™-6**







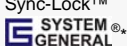
- NOTES: UNLESS OTHERWISE SPECIFIED
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  - B) ALL DIMENSIONS ARE IN MILLIMETERS.

Dimensions in Millimeters



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