

# SOT23 NPN SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

## FM51

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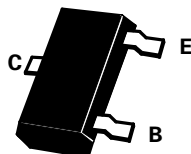


### FEATURES

- \* Low equivalent on-resistance;  $R_{CE(sat)} 400m\Omega$  at 1A
- \* 1 Amp continuous current
- \*  $P_{tot} = 500$  mW

COMPLEMENTARY TYPE – FM51

PARTMARKING DETAIL – 451



### ABSOLUTE MAXIMUM RATINGS.

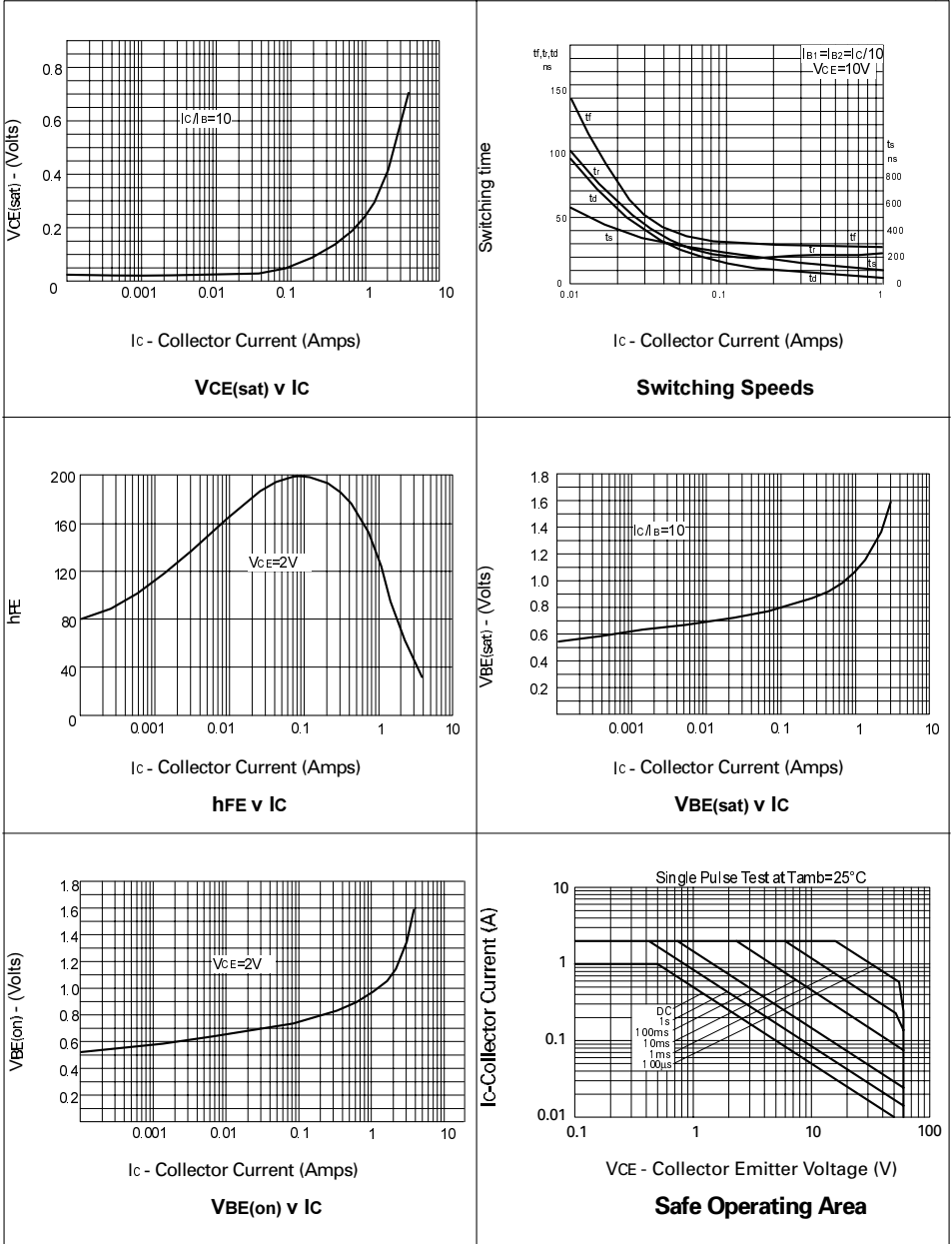
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	80	V
Collector-Emitter Voltage	$V_{CEO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Peak Pulse Current	$I_{CM}$	2	A
Continuous Collector Current	$I_C$	1	A
Base Current	$I_B$	200	mA
Power Dissipation at $T_{amb}=25^\circ C$	$P_{tot}$	500	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ C$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ C$ ).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80		V	$I_C = 100\mu A$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	60		V	$I_C = 10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E = 100\mu A$
Collector Cut-Off Current	$I_{CBO}$		0.1	$\mu A$	$V_{CB} = 60V$
Emitter Cut-Off Current	$I_{EBO}$		0.1	$\mu A$	$V_{EB} = 4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.35	V	$I_C = 150mA, I_B = 15mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.1	V	$I_C = 150mA, I_B = 15mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50 10	150		$I_C = 150mA, V_{CE} = 10V^*$ $I_C = 1A, V_{CE} = 10V^*$
Transition Frequency	$f_T$	150		MHz	$I_C = 50mA, V_{CE} = 10V$ $f = 100MHz$
Output Capacitance	$C_{obo}$		15	pF	$V_{CB} = 10V, f = 1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$

## TYPICAL CHARACTERISTICS





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