

FMMTA42

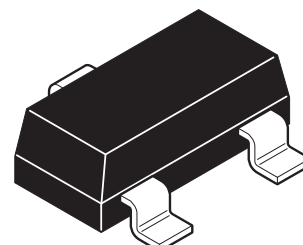
SOT23 NPN Silicon planar high voltage transistor

Device marking

FMMTA42 - 3E

Complementary types

FMMTA92



Absolute maximum ratings

Parameter	Symbol	FMMTA42	Unit
Collector-base voltage	V_{CBO}	300	V
Collector-emitter voltage	V_{CEO}	300	V
Emitter-base voltage	V_{EBO}	5	V
Continuous collector current	I_C	200	mA
Power dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	330	mW
Operating and storage temperature range	$T_j:T_{stg}$	-55 to +150	$^{\circ}C$

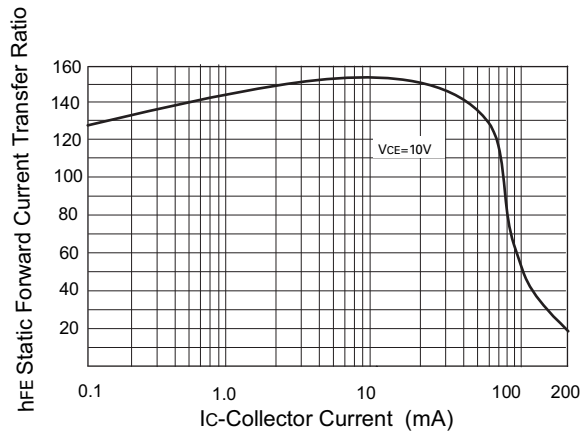
Electrical characteristics (at $T_{amb} = 25^{\circ}C$).

Parameter	Symbol	Min.	Max.	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	300		V	$I_C=100\mu A, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	300		V	$I_C=1mA, I_B=0^{(*)}$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6		V	$I_E=100\mu A, I_C=0$
Collector cut-off current	I_{CBO}		0.1	μA	$V_{CB}=200V, I_E=0$ $V_{CB}=160V, I_E=0$
Emitter cut-off current	I_{EBO}		0.1	μA	$V_{EB}=6V, I_C=0$ $V_{EB}=4V, I_C=0$
Collector-emitter saturation voltage	$V_{CE(sat)}$		0.5	V	$I_C=20mA, I_B=2mA^{(*)}$
Base-emitter saturation voltage	$V_{BE(sat)}$		0.9	V	$I_C=20mA, I_B=2mA^{(*)}$
Static forward current transfer ratio	h_{FE}	25 40 40			$I_C=1mA, V_{CE}=10V^{(*)}$ $I_C=10mA, V_{CE}=10V^{(*)}$ $I_C=30mA, V_{CE}=10V^{(*)}$
Transition frequency	f_T	50		MHz	$I_C=10mA, V_{CE}=20V$ $f=20MHz$
Output capacitance	C_{obo}		6	pF	$V_{CB}=20V, f=1MHz$

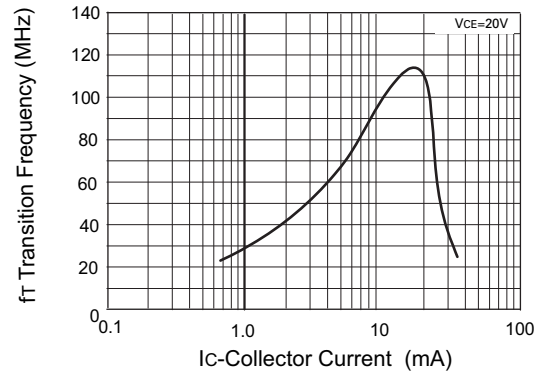
NOTES:

(*) Measured under pulsed conditions. Pulse width $\leq 300\mu s$; duty cycle $\leq 2\%$.

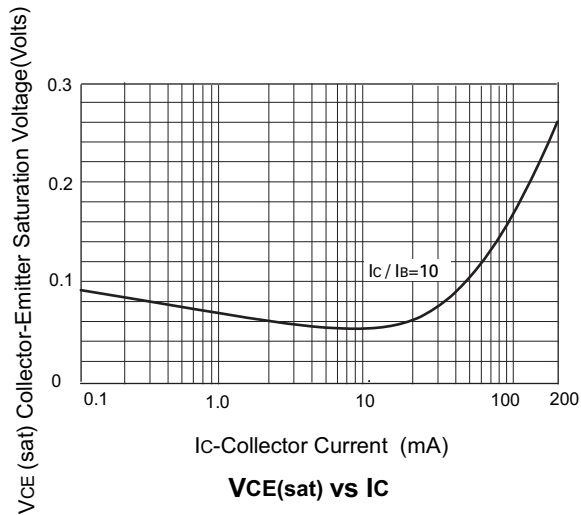
Typical characteristics



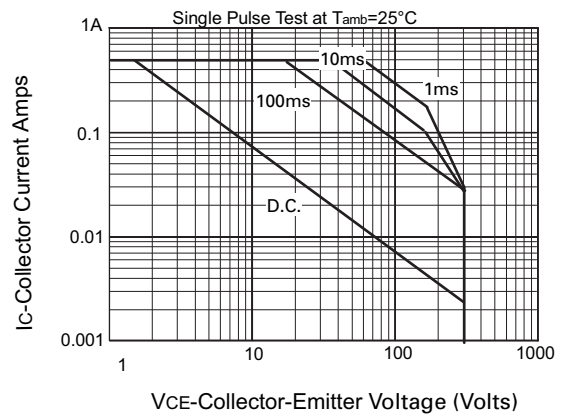
hFE vs IC



f_T vs IC



$V_{CE(sat)}$ vs IC



Safe operating area

Intentionally left blank

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