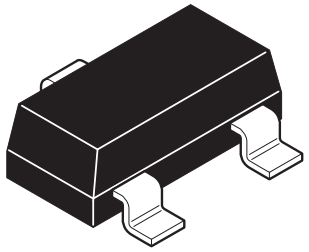
FMMTA42
SOT23 NPN Silicon planar high voltage transistor

Device marking

FMMTA42 - 3E



Complementary types

FMMTA92

Absolute maximum ratings

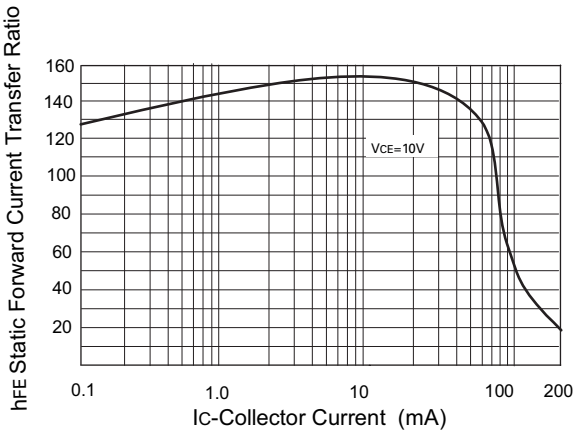
Parameter	Symbol	FMMTA42	Unit
Collector-base voltage	V_{CBO}	300	V
Collector-emitter voltage	V_{CEO}	300	V
Emitter-base voltage	V_{EBO}	5	V
Continuous collector current	I_C	200	mA
Power dissipation at T_{amb}=25°C	P_{tot}	330	mW
Operating and storage temperature range	T_j:T_{stg}	-55 to +150	°C

Electrical characteristics (at T_{amb} = 25°C).

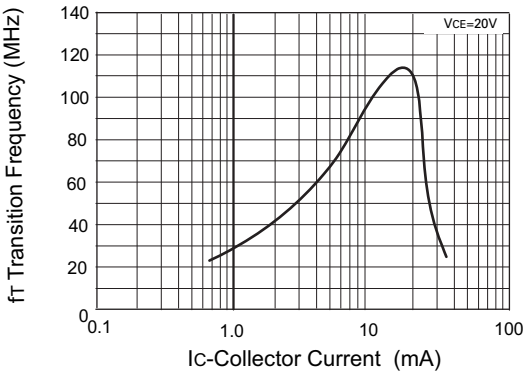
Parameter	Symbol	Min.	Max.	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	300		V	I_C=100µA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	300		V	I_C=1mA, I_B=0 (*)
Emitter-base breakdown voltage	$V_{(BR)EBO}$	6		V	I_E=100µA, I_C=0
Collector cut-off current	I_{CBO}		0.1	µA	V_{CB}=200V, I_E=0
				µA	V_{CB}=160V, I_E=0
Emitter cut-off current	I_{EBO}		0.1	µA	V_{EB}=6V, I_C=0
				µA	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			I_C=1mA, V_{CE}=10V(*)
		40			I_C=10mA, V_{CE}=10V(*)
		40			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 ≤ 300µs; duty cycle ≤ 2%.

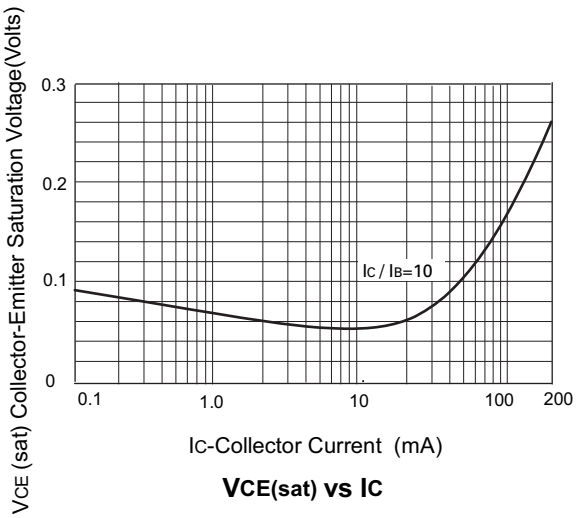
Typical characteristics



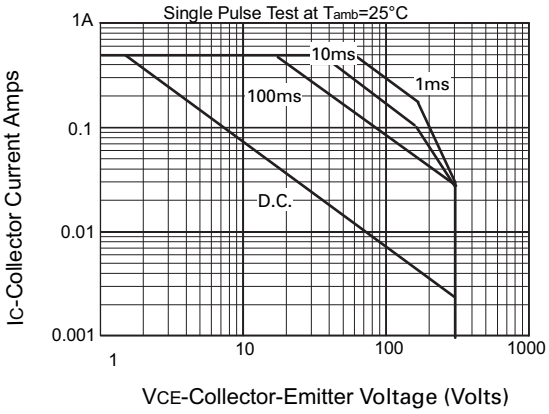
hFE vs IC



fT vs IC



VCE(sat) vs IC



Safe operating area

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"Last time buy (LTB)"	Device will be discontinued and last time buy period and delivery is in effect
"Not recommended for new designs"	Device is still in production to support existing designs and production
"Obsolete"	Production has been discontinued

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Europe	**Americas**	**Asia Pacific**	**Corporate Headquarters**
Zetex GmbH Kustermann-park Balanstraße 59 D-81541 München Germany	Zetex Inc 700 Veterans Memorial Highway Hauppauge, NY 11788 USA	Zetex (Asia Ltd) 3701-04 Metroplaza Tower 1 Hing Fong Road, Kwai Fong Hong Kong	Zetex Semiconductors plc Zetex Technology Park, Chadderton Oldham, OL9 9LL United Kingdom
Telefon: (49) 89 45 49 49 0 Fax: (49) 89 45 49 49 49 europe.sales@zetex.com	Telephone: (1) 631 360 2222 Fax: (1) 631 360 8222 usa.sales@zetex.com	Telephone: (852) 26100 611 Fax: (852) 24250 494 asia.sales@zetex.com	Telephone: (44) 161 622 4444 Fax: (44) 161 622 4446 hq@zetex.com