PART OBSOLETE - USE MMBTA06-7-F

FMMTA06

SOT23 NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

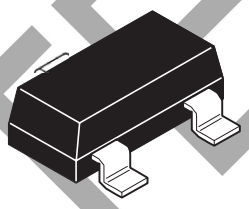
SUMMARY

$V_{(BR)CEO}$ > 80V

$I_{C(cont)}$ = 500mA

DESCRIPTION

80V medium power NPN transistor in a compact SOT23 package

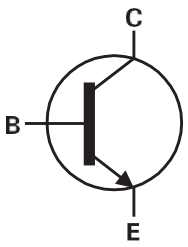


SOT23

FEATURES

- 80V V_{CEO}
- Compact SOT23 package
- H_{FE} 50 @ I_C = 100mA

SYMBOL



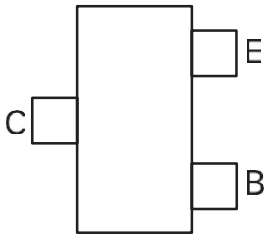
APPLICATIONS

- Low power motor driving circuits

ORDERING INFORMATION

DEVICE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL
FMMTA06TA	7"	8mm	3,000

PINOUT



TOP VIEW

DEVICE MARKING

- 1G

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ZETEX SEMICONDUCTORS

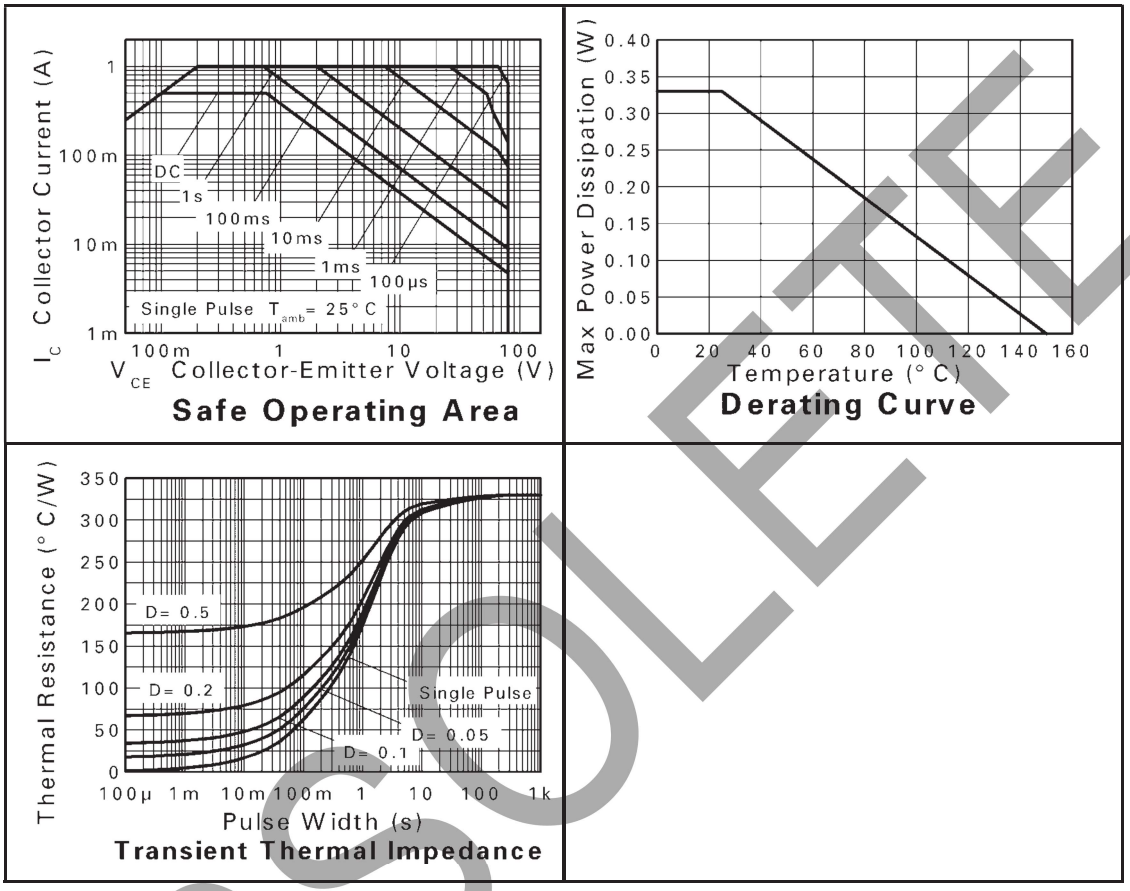
ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	LIMIT	UNIT
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	4	V
Peak pulse current	I_{CM}	1	A
Continuous collector current	I_C	500	mA
Base current	I_B	100	mA
Power dissipation @ T_A= 25° C Linear derating factor	P_D	330 2.64	mW mW/° C
Operating and storage temperature	T_j;T_{stg}	-55 to + 150	° C

THERMAL RESISTANCE

PARAMETER	SYMBOL	VALUE	UNIT
Junction to ambient	$R0_{JA}$	379	° C/W

CHARACTERISTICS



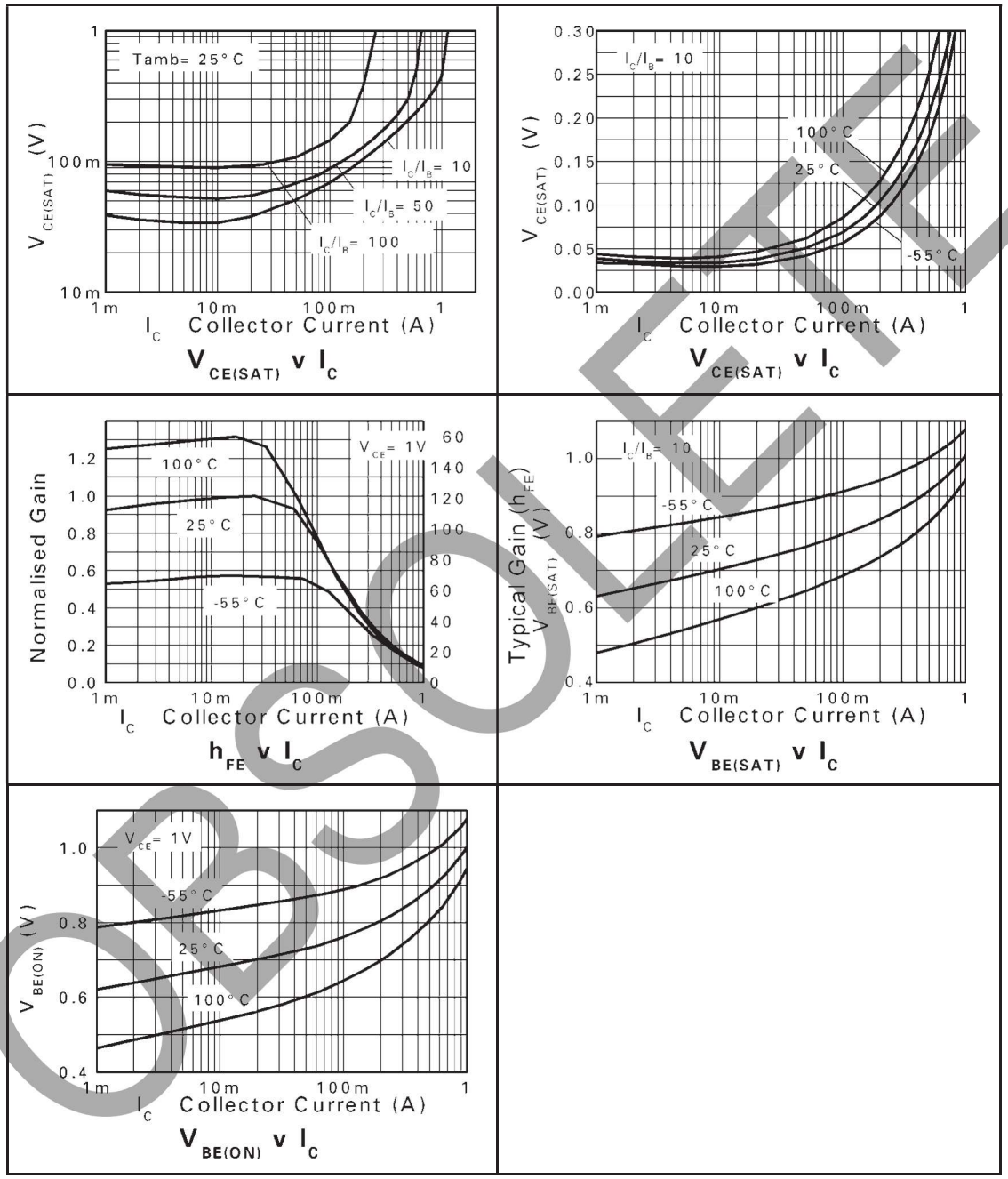
ELECTRICAL CHARACTERISTICS(at T_{amb} = 25° C unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Collector-base breakdown voltage	$V_{(BR)CBO}$	80			V	I_C= 1 mA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	80			V	I_C= 10 mA*
Emitter-base breakdown voltage	$V_{(BR)EBO}$	4			V	I_E= 100 A
Collector-emitter cut-off current	I_{CES}			100	nA	V_{CES}= 60V
Collector-base cut-off current	I_{CBO}			100	nA	V_{CB}= 80V
Static forward current transfer ratio	H_{FE}	50 50	120			I_C= 10 mA, V_{CE}= 1V* I_C= 100 mA, V_{CE}= 1V*
Collector-emitter saturation voltage	$V_{CE(sat)}$			0.25	V	I_C= 100 mA, I_B= 10 mA*
Base-emitter turn-on voltage	$V_{BE(on)}$			1.2	V	I_C= 0.1A, V_{CE}= 1V*
Transition frequency	f_T	100				I_C= 10 mA, V_{CE}= 2V, f= 100 MHz

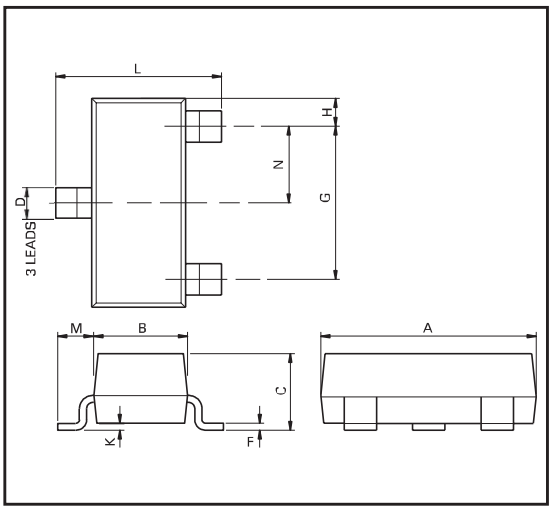
NOTES

* Measured under pulsed conditions. Pulse width= 300 S. Duty cycle <2%

TYPICAL CHARACTERISTICS



PACKAGE OUTLINE



Controlling dimensions are in millimeters. Approximate conversions are given in inches

PACKAGE DIMENSIONS

DIM	Millimeters		Inches		DIM	Millimeters		Inches	
	Min	Max	Min	Max		Min	Max	Max	Max
A	2.67	3.05	0.105	0.120	H	0.33	0.51	0.013	0.020
B	1.20	1.40	0.047	0.055	K	0.01	0.10	0.0004	0.004
C		1.10		0.043	L	2.10	2.50	0.083	0.0985
D	0.37	0.53	0.015	0.021	M	0.45	0.64	0.018	0.025
F	0.085	0.15	0.0034	0.0059	N	0.95 NOM		0.0375 NOM	
G	1.90 NOM		0.075 NOM						

Europe	Americas	Asia Pacific	Corporate Headquaters
Zetex GmbH Streitfeldstraße 19 D-81673 München Germany	Zetex Inc 700 Veterans Memorial Hwy 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

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