



ZTX618

NPN SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

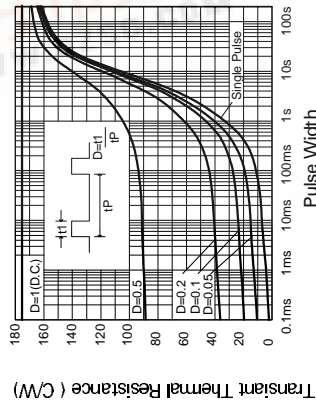
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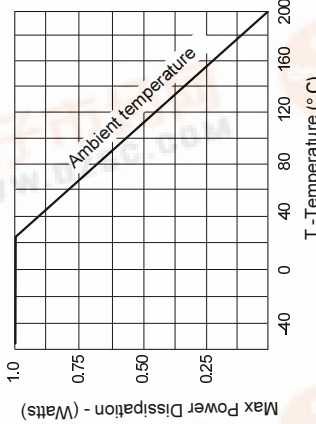
HERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance: Junction to Ambient ₁	$R_{th(j-amb)1}$	175	$^{\circ}C/W$
Junction to Ambient ₂	$R_{th(j-amb)2} \dagger$	116	$^{\circ}C/W$

Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.



Transient Thermal Resistance



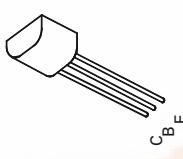
Derating curve

FEATURES

- * 10A Peak pulse current
- * Excellent h_{FE} characteristics up to 10A (pulsed)
- * Extremely low saturation voltage e.g. 7mV typ.
- * I_c cont 3.5A

APPLICATIONS

- * Power MOSFET gate driver in conjunction with complementary ZTX718



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	10	A
Continuous Collector Current	I_C	3.5	A
Base Current	I_B	500	mA
Practical Power Dissipation*	P_{totp}	1.5	W
Power Dissipation	P_{tot}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	$^{\circ}C$

* Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.

查询FXT618供应商

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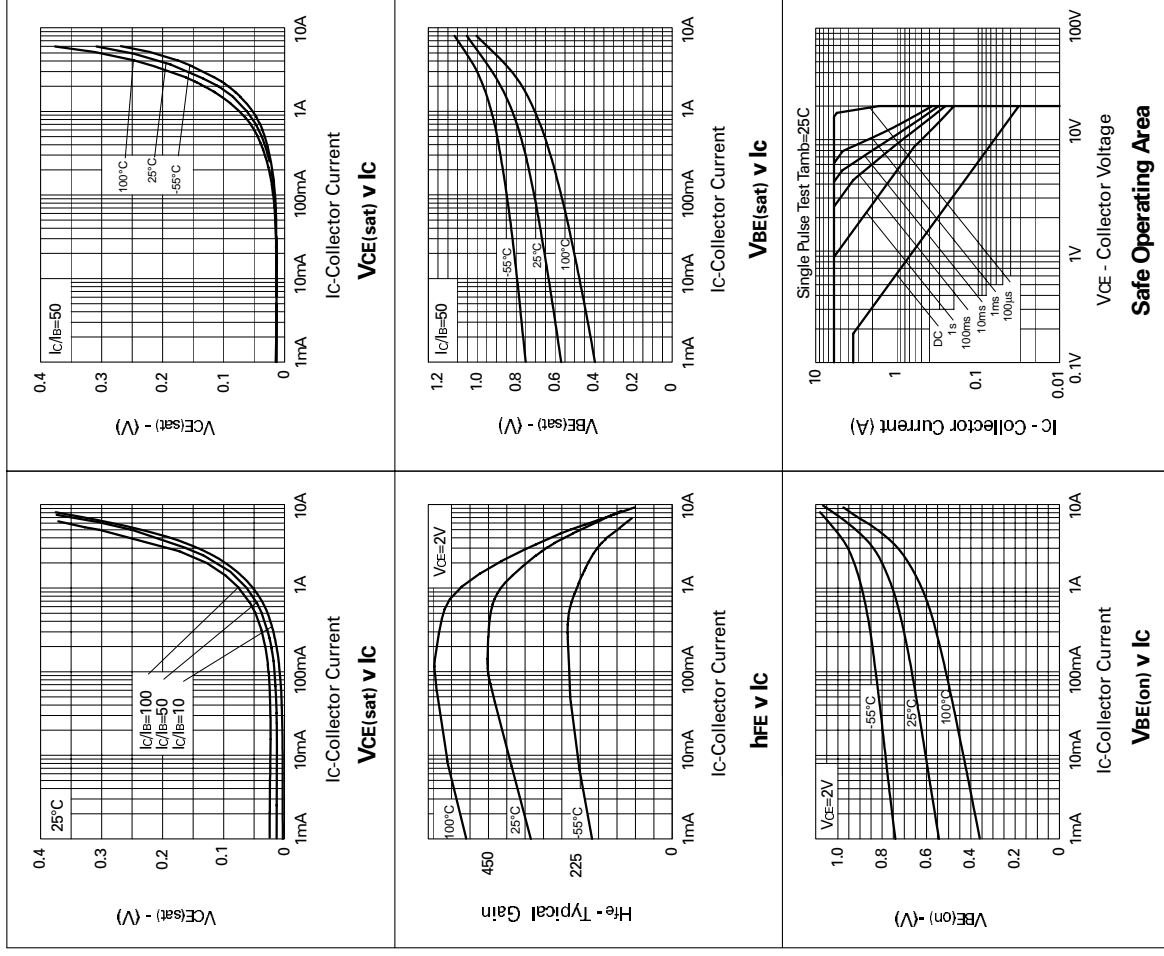


ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V _{(BR)CBO}	20	100		V	I _C =100μA
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	20	27		V	I _C =10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5	8.3		V	I _E =100μA
Collector Cut-Off Current	I _{CBO}			100	nA	V _{CB} =16V
Emitter Cut-Off Current	I _{EBO}			100	nA	V _{EB} =4V
Collector Emitter Cut-Off Current	I _{CES}			100	nA	V _{CE} S=16V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		7 80 210	15 150 255	mV mV mV	I _C =0.1A, I _B =10mA* I _C =1A, I _B =10mA* I _C =3.5A, I _B =50mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}		0.93	1.05	V	I _C =3.5A, I _B =50mA*
Base-Emitter Turn-On Voltage	V _{BE(on)}		0.86	1.0	V	I _C =3.5A, V _{CE} =2V*
Static Forward Current Transfer Ratio	h _{FE}	200 300 170 40	400 450 300 85			I _C =10mA, V _{CE} =2V* I _C =200mA, V _{CE} =2V* I _C =3A, V _{CE} =2V* I _C =10A, V _{CE} =2V*
Transition Frequency	f _T	100	140		MHz	I _C =50mA, V _{CE} =10V f=100MHz
Output Capacitance	C _{obo}		23	30	pF	V _{CB} =10V, f=1MHz
Turn-On Time	t _(on)		170		ns	V _{CC} =10V, I _C =1A I _{B1} =I _{B2} =10mA
Turn-Off Time	t _(off)		400		ns	

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

TYPICAL CHARACTERISTICS



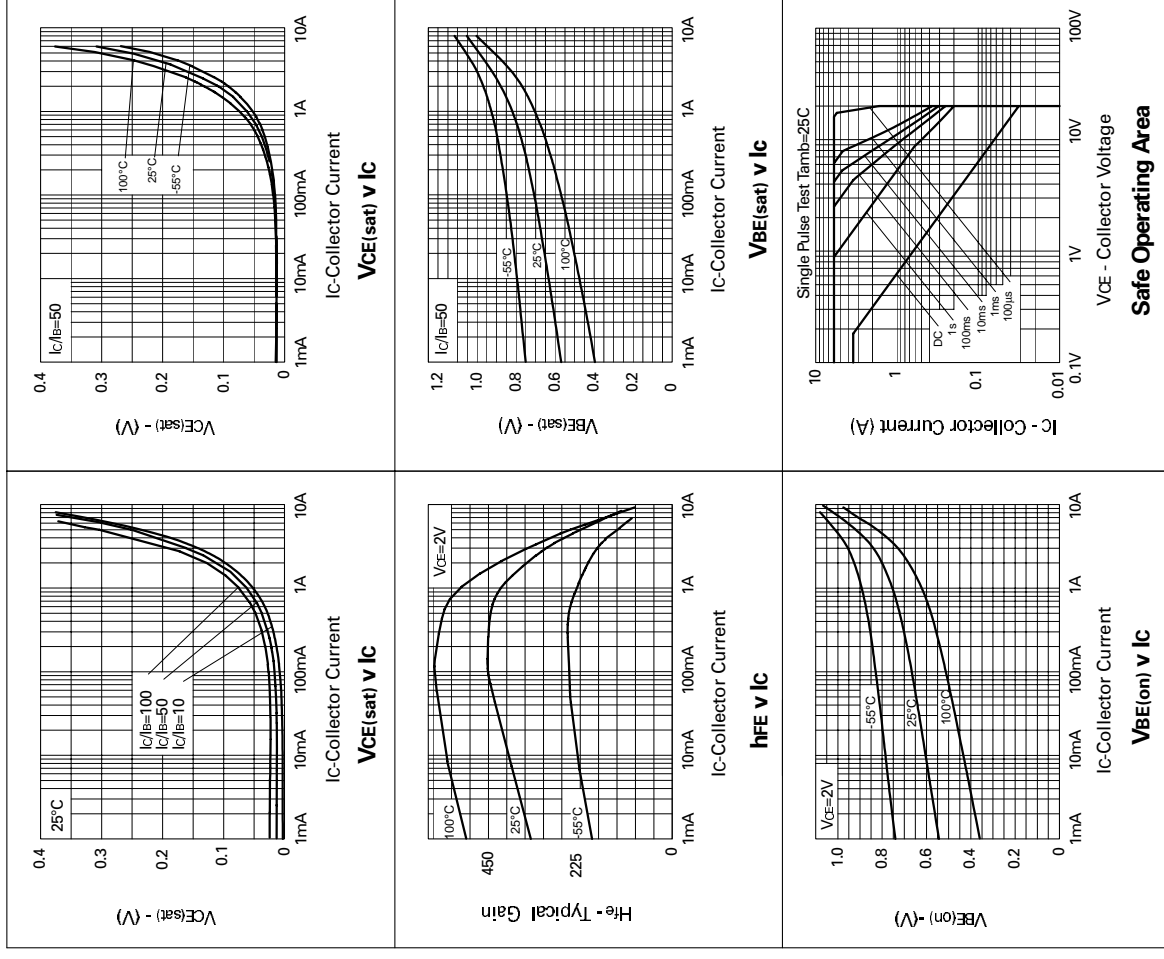
Safe Operating Area

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Emitter Cut-Off Current	I _{EBO}			100	nA	V _{EB} =4V
Collector Emitter Cut-Off Current	I _{CES}			100	nA	V _{CE} S=16V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		7	15	mV	I _C =0.1A, I _B =10mA*
			80	150	mV	I _C =1A, I _B =10mA*
			210	255	mV	I _C =3.5A, I _B =50mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}		0.93	1.05	V	I _C =3.5A, I _B =50mA*
Base-Emitter Turn-On Voltage	V _{BE(on)}		0.86	1.0	V	I _C =3.5A, V _{CE} =2V*
Static Forward Current Transfer Ratio	h _{FE}	200	400			I _C =10mA, V _{CE} =2V*
		300	450			I _C =200mA, V _{CE} =2V*
		170	300			I _C =3A, V _{CE} =2V*
		40	85			I _C =10A, V _{CE} =2V*
Transition Frequency	f _T	100	140		MHz	I _C =50mA, V _{CE} =10V f=100MHz
Output Capacitance	C _{obo}		23	30	pF	V _{CB} =10V, f=1MHz
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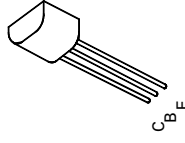
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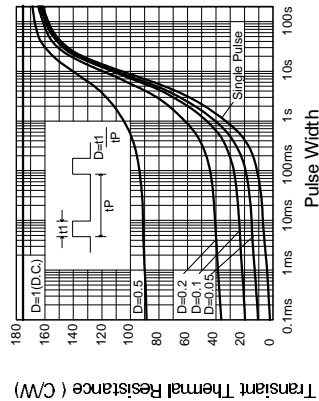


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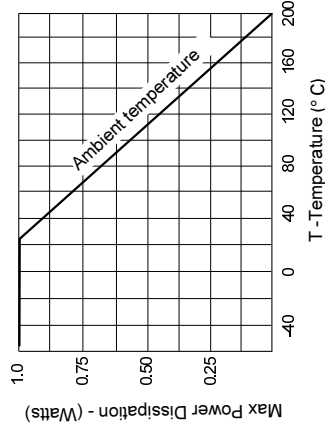
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Derating curve

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