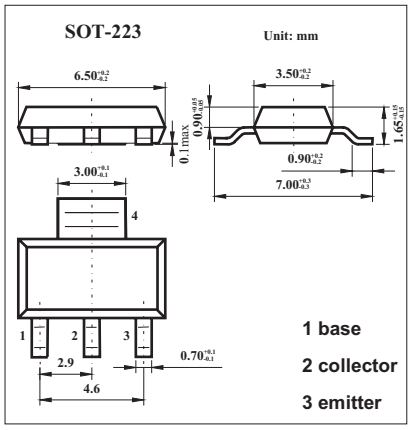
TY Semicondutor®

Product specification

FZT688B



■ Features

- Extremely low equivalent on resistance; $R_{CE(sat)}$83mΩ at 3A.
- Gain of 400 at I_C=3 Amps and very low saturation voltage.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	12	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	5	V
Peak pulse current	I_C	4	A
Continuous collector current	I_{CM}	10	A
Power dissipation	P_{tot}	2	W
Operating and storage temperature range	T_j,T_{stg}	-55 to +150	℃

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	I_C=100μA	12			V
Breakdown Voltages	$V_{(BR)CEO}$	I_C=10mA	12			V
Breakdown Voltages	$V_{(BR)EBO}$	I_E=100μA	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=10V			0.1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4V			0.1	μA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	I_C=0.1A, I_B=1mA I_C=0.1A, I_B=0.5mA I_C=1A, I_B=50mA I_C=3A, I_B=20mA I_C=4A, I_B=50mA			0.04 0.06 0.18 0.35 0.40	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	I_C=3A, I_B=20mA			1.1	V
Base-Emitter Turn-On Voltage *	$V_{BE(on)}$	I_C=3A, V_{CE}=2V			1.0	V
Static Forward Current Transfer Ratio*	h_{FE}	I_C=0.1A, V_{CE}=2V I_C=3A, V_{CE}=2V I_C=10A, V_{CE}=2V	500 400 100			
Transitional frequency	f_T	I_C=50mA, V_{CE}=5V f=50MHz	150			MHz
Input capacitance	C_{ibo}	V_{EB}=0.5V, f=1MHz		200		pF
Output capacitance	C_{obo}	V_{CB}=10V, f=1MHz		40		pF
Turn-on time	$t_{(on)}$	I_C=500mA, V_{CC}=10V		40		ns
Turn-off time	$t_{(off)}$	I_{B1}=50A,I_{B2}=50mA		500		ns

* Pulse test: tp = 300 μs; d ≤ 0.02.

■ Marking

Marking	FZT688B