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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SOT223 PNP SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

## FZT705

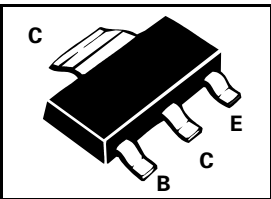
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### FEATURES

- \* 2A CONTINUOUS CURRENT
- \* FAST SWITCHING
- \* GUARANTEED HFE SPECIFIED UP TO 2A

COMPLEMENTARY TYPE – FZT 605

PART MARKING DETAIL – FZT705



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-140	V
Collector-Emitter Voltage	$V_{CEO}$	-120	V
Emitter-Base Voltage	$V_{EBO}$	-10	V
Peak Pulse Current	$I_{CM}$	-4	A
Continuous Collector Current	$I_C$	-2	A
Power Dissipation	$P_{TOT}$	2	W
Operating and Storage Temperature Range	tj:tstg	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Breakdown Voltages	$V_{(BR)CBO}$	-140			V	$I_C = -100\text{mA}$
	$V_{(BR)CEO}$	-120			V	$I_C = -10\text{mA}^*$
	$V_{(BR)EBO}$	-10			V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$			-0.1 -10	$\mu\text{A}$	$V_{CB} = -120\text{V}$ $V_{CB} = -120\text{V}, T_{amb} = 100^\circ\text{C}$
	$I_{CES}$			-10	$\mu\text{A}$	$V_{CES} = -80\text{V}$
Emitter Cut-Off Current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB} = -8\text{V}$
Saturation Voltages	$V_{CE(sat)}$			-1.3 -2.5	V	$I_C = -1\text{A}, I_B = -1\text{mA}$ $I_C = -2\text{A}, I_B = -2\text{mA}$
	$V_{BE(sat)}$			-1.8	V	$I_C = -1\text{A}, I_B = -10\text{mA}$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.7	V	$I_C = -1\text{A}, V_{CE} = -5\text{V}$
Static Forward Current Transfer	$h_{FE}$	3000 3000 3000 2000		30000		$I_C = -10\text{mA}, V_{CE} = -5\text{V}$ $I_C = -100\text{mA}, V_{CE} = -5\text{V}$ $I_C = -1\text{A}, V_{CE} = -5\text{V}$ $I_C = -2\text{A}, V_{CE} = -5\text{V}$
Transitional Frequency	$f_T$		160		MHz	$I_C = -100\text{mA}, V_{CE} = -10\text{V}$ $f = 20\text{MHz}$
Output Capacitance	$C_{obo}$		15		pF	$V_{EB} = -10\text{V}, f = 1\text{MHz}$
Switching Times	$T_{on}$		0.6		$\mu\text{s}$	$I_C = -0.5\text{A}, V_{CE} = -10\text{V}$
	$T_{off}$		0.8		$\mu\text{s}$	$I_{B1} = I_{B2} = 0.5\text{mA}$

\*Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$   
Spice parameter data is available upon request for this device

# FZT705 FZT704

## TYPICAL CHARACTERISTICS

