Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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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SOT89 NPN SILICON PLANAR DARLINGTON TRANSISTOR

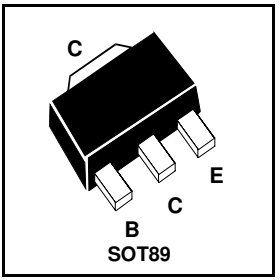
BST51

ISSUE 3 – JANUARY 1996

FEATURES

* Fast Switching
* High h_{FE}

PARTMAKING DETAIL — AS2



SOT89

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	10	V
Pea Pulse Current	I_{CM}	1.5	A
Continuous Collector Current	I_C	500	mA
Base Current	I_B	100	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	1	W
Operating and Storage Temperature Range	T_j:T_{stg}	-65 to +150	°C

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80		V	I_C=10μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60		V	I_C=10mA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10		V	I_E=10μA, I_C=0
Emitter Cut-Off Current	I_{EBO}		10	μA	V_{EB}=8V, I_E=0
Collector-Emitter Cut-Off Current	I_{CES}		10	μA	V_{CE}=60V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		1.3 1.3	V V	I_C=500mA, I_B=0.5mA I_C=500mA, I_B=0.5mA T_j=150°C
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.9	V	I_C=500mA, I_B=0.5mA
Static Forward Current Transfer Ratio	h_{FE}	1K 2K			I_C=150mA, V_{CE}=10V* I_C=-500mA, V_{CE}=-10V*
Turn On Time	t_{on}	400 Typical		ns	I_C=500mA I_{Bon}=I_{Boff}=0.5mA
Turn Off Time	t_{off}	1.5K Typical		ns	

* Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%
Spice parameter data is available upon request for this device
For typical graphs see FMMT38A datasheet