

General Purpose Transistor

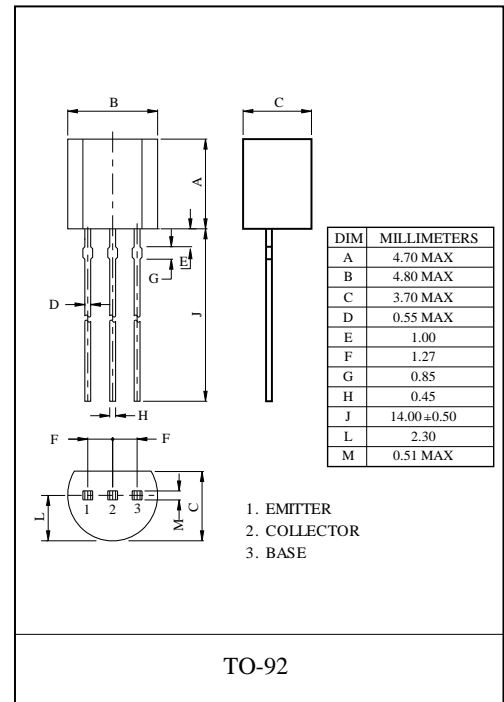
NPN Silicon

FEATURE

Complementary PNP Type available (FTB1116A)

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	1	A
P_C	Collector Power Dissipation	750	mW
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 to 150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2\text{mA}, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE1}	$V_{CE}=2\text{V}, I_C=100\text{mA}$	135		600	
	h_{FE2}	$V_{CE}=2\text{V}, I_C=1\text{A}$	81			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$			0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$			1.2	V
Base-emitter voltage *	V_{BE}	$V_{CE}=2\text{V}, I_C=50\text{mA}$	0.6		0.7	V
Transition frequency	f_T	$V_{CE}=2\text{V}, I_C=100\text{mA}$	100			MHz
Output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			19	pF
Turn on time	t_{on}	$V_{CC}=10\text{V}, I_C=100\text{mA}, I_{B1}=-I_{B2}=10\text{mA}$		0.07		μs
Storage time	t_s			0.95		μs
Fall time	t_f			0.07		μs

*pulse test: $PW \leq 350\mu\text{s}, \delta \leq 2\%$.

CLASSIFICATION OF h_{FE1}

Rank	L	K	U
Range	135-270	200-400	300-600



FTD1616A

