

## General Purpose Transistor

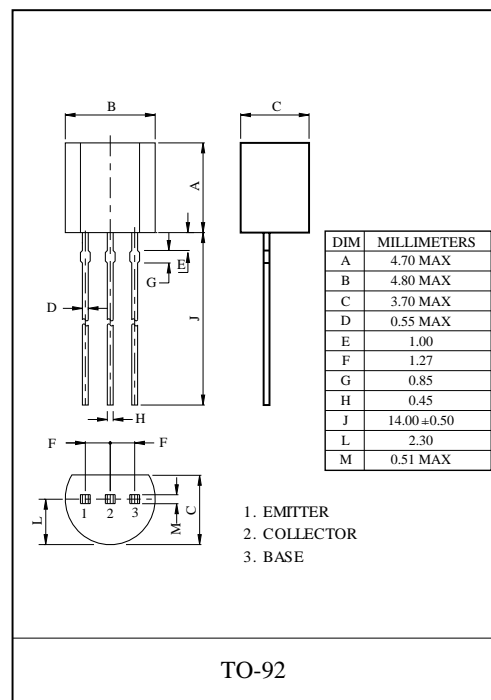
### PNP Silicon

#### FEATURES

- \* High Collector Power Dissipation
- \* Complementary NPN Type available (FTD1616A)

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-80	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	0.75	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	2SB1116	-60		V
			2SB1116A	-80		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	2SB1116	-50		V
			2SB1116A	-60		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$	2SB1116		-0.1	$\mu\text{A}$
		$V_{CB}=-80\text{V}, I_E=0$	2SB1116A			
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-6\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-2\text{V}, I_C=-0.1\text{A}$		135	600	
	$h_{FE(2)}$	$V_{CE}=-2\text{V}, I_C=-1\text{A}$		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	$V_{BE}$	$V_{CE}=-2\text{V}, I_C=-0.05\text{A}$	-0.6		-0.7	V
Transition frequency	$f_T$	$V_{CE}=-2\text{V}, I_C=-0.1\text{A}$	70			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		25		pF
Turn-on time	$t_{on}$	$V_{CC}=-10\text{V}, I_C=-0.1\text{A}, I_{B1}=-I_{B2}=-0.01\text{A}, V_{BE(Off)}=2\text{to}3\text{V}$		0.07		us
Storage time	$t_s$			0.7		us
Fall time	$t_f$			0.07		us

#### CLASSIFICATION OF $h_{FE(1)}$

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



# FTB1116A

