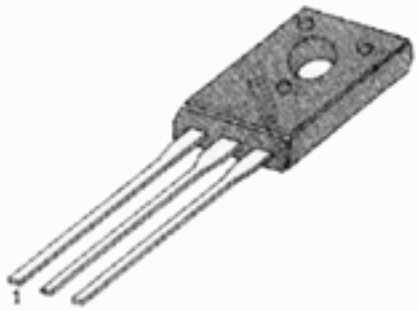
13001
NPN Epitaxial Silicon Transistor

Features

- Collector-Emitter Voltage: V_{CEO}= 400V
- Collector Dissipation: P_C(max)= 1000mW

TO-126



1. Emitter 2. Collector 3. Base

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	200	mA
Collector Dissipation	P_C	1000	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

Electrical Characteristics (TA=25°C)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, I_E=0	600		V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=1mA, I_B=0	400		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA, I_C=0	7		V
Collector Cut-off Current	I_{CBO}	V_{CB}=600V, I_E=0		100	μA
Collector Cut-off Current	I_{CEO}	V_{CE}=400V, I_B=0		200	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=7V, I_C=0		100	μA
DC Current Gain	$h_{FE(1)}$	V_{CE}=20V, I_C=20mA	10	40	
	$h_{FE(2)}$	V_{CE}=10V, I_C=0.25mA	5		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=50mA, I_B=10mA		0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=50mA, I_B=10mA		1.2	V
Base-emitter Voltage	V_{BE}	I_E= 100mA		1.1	V
Transition Frequency	f_f	V_{CE}=20V, I_C=20mA			
		f=1MHz	8		MHz
Fall Time	t_f	IC=50mA, I_{B1}=-1_{B2}=5mA,		0.3	μS
Storage Time	t_s	Vcc= 45V		1.5	μS

h_{FE}(1) CLASSIFICATION

Classification						
$h_{FE(1)}$	10-15	15-20	20-25	25-30	30-35	35-40

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