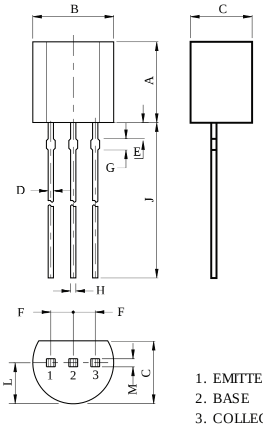
FTC1008 TRANSISTOR (NPN)



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.55 MAX
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
L	2.30
M	0.51 MAX

1. EMITTER
2. BASE
3. COLLECTOR

TO-92

FEATURES

- General Purpose Switching and Amplification

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current	700	mA
P_C	Collector Power Dissipation	800	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	156	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,I_E=0	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.01mA,I_C=0	8			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=2V, I_C=50mA	40		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA,I_B=50mA			0.4	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C=500mA,I_B=50mA			1.1	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_C=0, f=1MHz		8		pF
Transition frequency	f_T	V_{CE}=10V,I_C= 50mA	30			MHz

CLASSIFICATION OF h_{FE}

RANK	R	O	Y	G
RANGE	40-80	70-140	120-240	200-400

Electrical characteristic curves

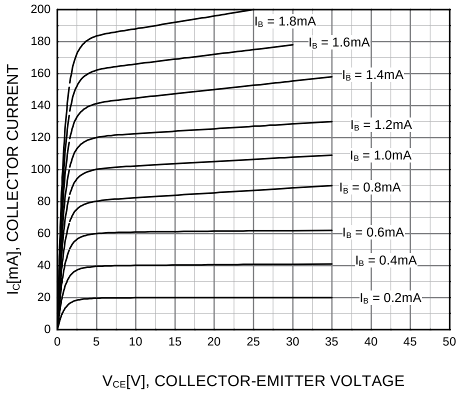


Figure 1. Static Characteristic

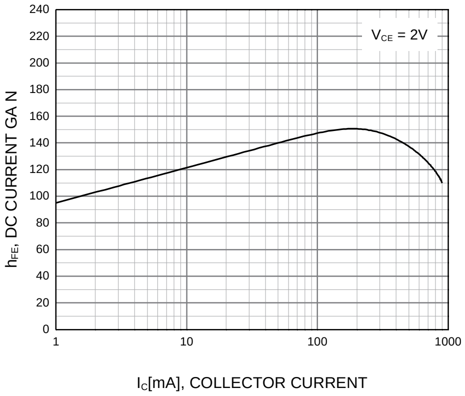


Figure 2. DC current Gain

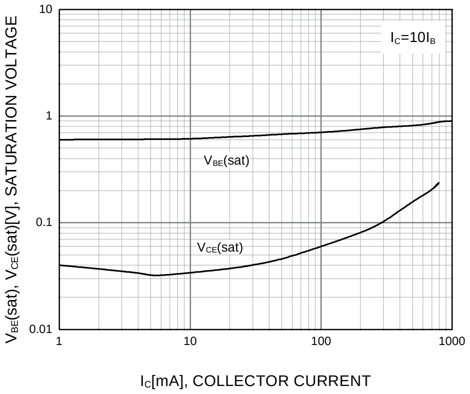


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

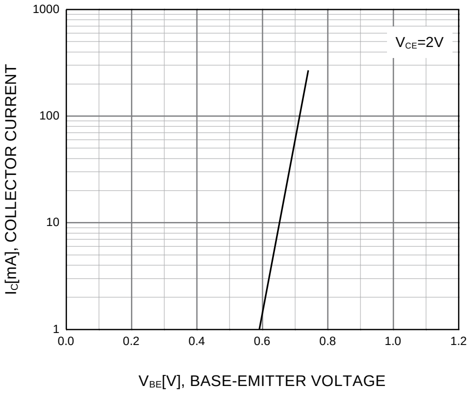


Figure 4. Base-Emitter On Voltage

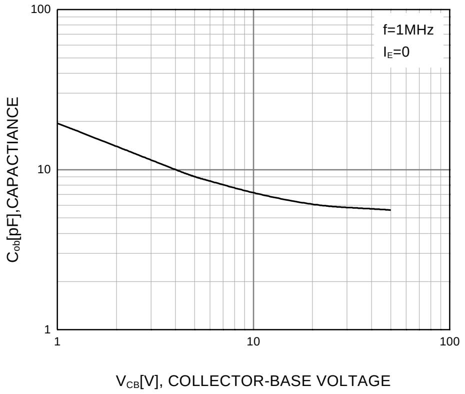


Figure 5. Collector Output Capacitance