

**Power Regulator
Low Frequency High Power Amplifier**

- Collector-Base Voltage : $V_{CBO}=80V$
- Collector Dissipation : $P_C=25W(T_C=25^{\circ}C)$



TO-220
1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	3	A
P_C	Collector Dissipation ($T_C=25^{\circ}C$)	25	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^{\circ}C$

Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=500\mu A, I_E=0$	80			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10mA, I_B=0$	55			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=500\mu A, I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=50V, I_E=0$			50	μA
h_{FE}	DC Current Gain	$V_{CE}=5V, I_C=0.5A$	40		240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1A, I_B=0.1A$			1	V

h_{FE} Classification

Classification	R	O	Y
h_{FE}	40 ~ 80	70 ~ 140	120 ~ 240

Typical Characteristics

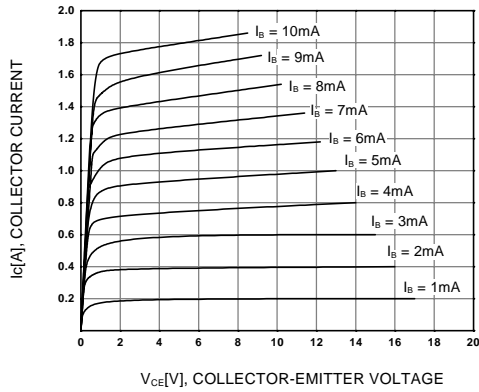


Figure 1. Static Characteristic

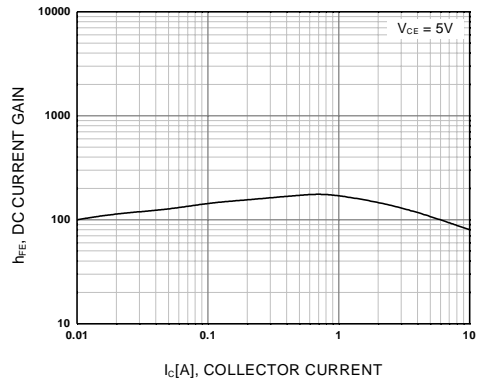


Figure 2. DC current Gain

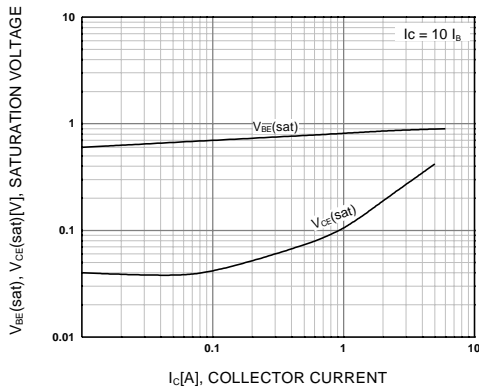


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

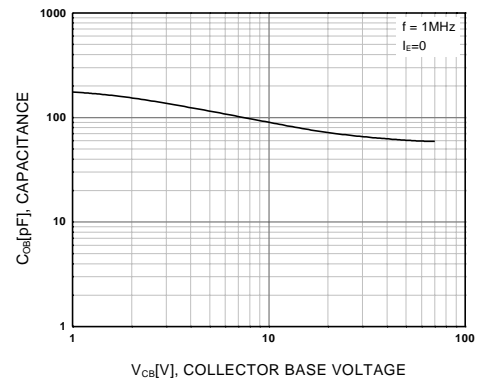


Figure 4. Collector Output Capacitance

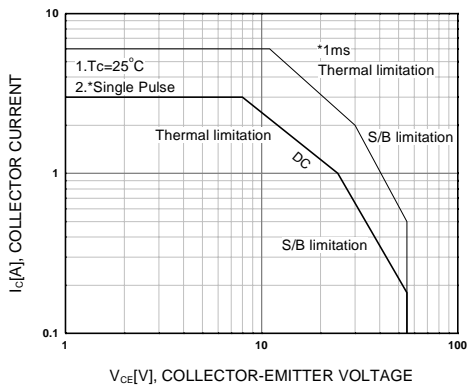


Figure 5. Safe Operating Area

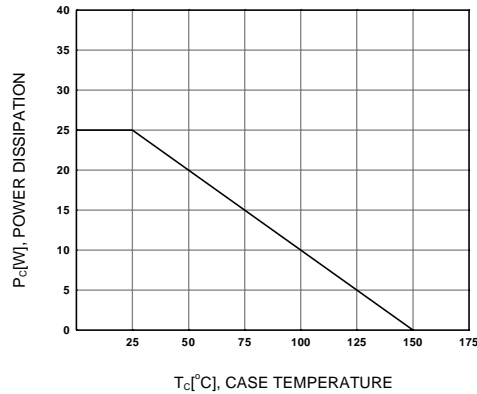


Figure 6. Power Derating

Package Dimensions

TO-220



Dimensions in Millimeters

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