Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

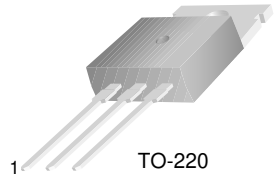
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

ON Semiconductor®

FJP13007
High Voltage Fast-Switching NPN Power Transistor

Features

- High Voltage High Speed Power Switch Application
- High Voltage Capability
- High Switching Speed
- Suitable for Electronic Ballast and Switching Mode Power Supply



1.Base 2.Collector 3.Emitter

Ordering Information

Part Number	Top Mark	Package	Packing Method
FJP13007TU	J13007	TO-220 3L (Dual Gauge)	Rail
FJP13007H1TU	J13007-1	TO-220 3L (Single Gauge)	Rail
FJP13007H1TU-F080	J13007-1	TO-220 3L (Dual Gauge)	Rail
FJP13007H2TU	J13007-2	TO-220 3L (Dual Gauge)	Rail
FJP13007H2TU-F080	J13007-2	TO-220 3L (Dual Gauge)	Rail

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_C = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current (DC)	8	A
I_{CP}	Collector Current (Pulse)	16	A
I_B	Base Current (DC)	4	A
P_C	Collector Dissipation (T_C = 25°C)	80	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-65 to 150	°C

September-2017, Rev. 2

Publication Order Number:
FJP13007/D

Electrical Characteristics

Values are at T_C = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10 mA, I_B = 0	400			V
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 9 V, I_C = 0			1	mA
$h_{FE}1$	DC Current Gain(1)	V_{CE} = 5 V, I_C = 2 A	8		60	
$h_{FE}2$	DC Current Gain(1)	V_{CE} = 5 V, I_C = 5 A	5		30	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 2 A, I_B = 0.4 A			1.0	V
		I_C = 5 A, I_B = 1 A			2.0	
		I_C = 8 A, I_B = 2 A			3.0	
V_{BE}(sat)	Collector-Base Saturation Voltage	I_C = 2 A, I_B = 0.4 A			1.2	V
		I_C = 5 A, I_B = 1 A			1.6	
f_T	Current Gain Bandwidth Product	V_{CE} = 10 V, I_C = 0.5 A	4			MHz
C_{ob}	Output Capacitance	V_{CB} = 10 V, f = 0.1 MHz		110		pF
t_{ON}	Turn-On Time	V_{CC} = 125 V, I_C = 5 A, I_{B1} = -I_{B2} = 1 A, R_L = 25 Ω			1.6	µs
t_{STG}	Storage Time				3.0	µs
t_F	Fall Time				0.7	µs

Note:

1. Pulse test: pw ≤ 300 µs, duty cycle ≤ 2%.

h_{FE} Classification

Classification	H1	H2
$h_{FE}1$	15 ~ 28	26 ~ 39

Typical Performance Characteristics

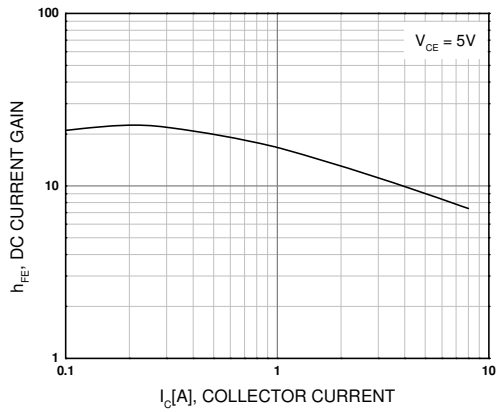


Figure 1. DC Current Gain

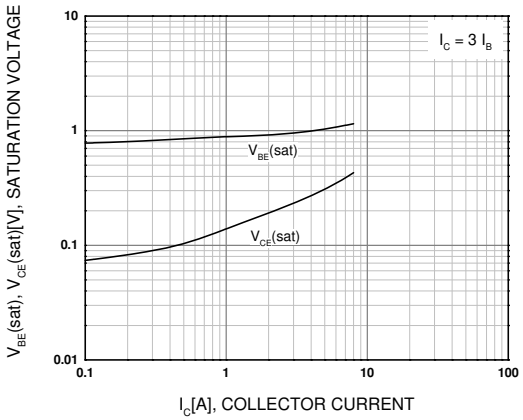


Figure 2. Saturation Voltage

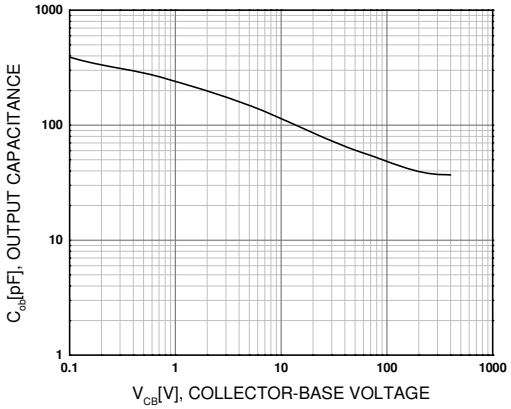


Figure 3. Collector Output Capacitance

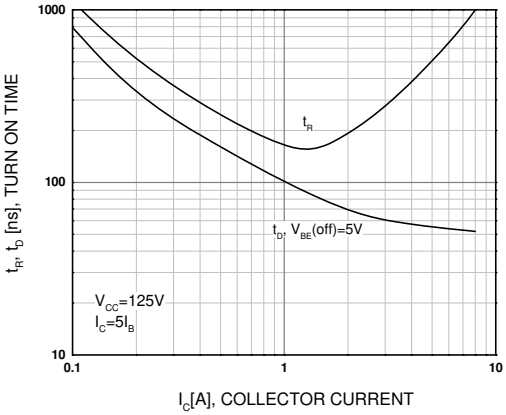


Figure 4. Turn-On Time

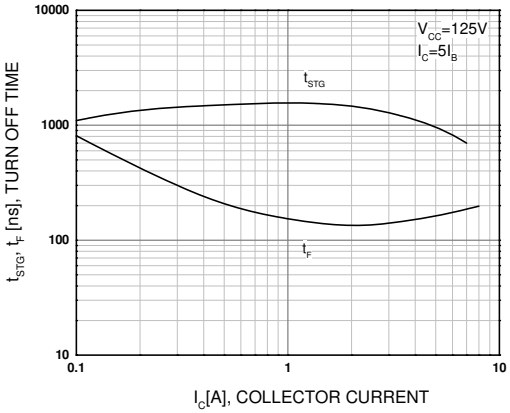


Figure 5. Turn-Off Time

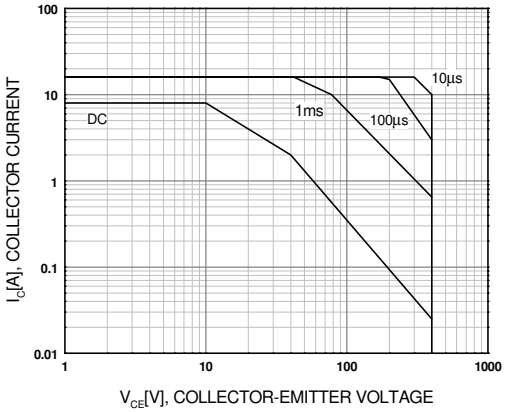


Figure 6. Forward Biased Safe Operating Area

Typical Performance Characteristics (Continued)

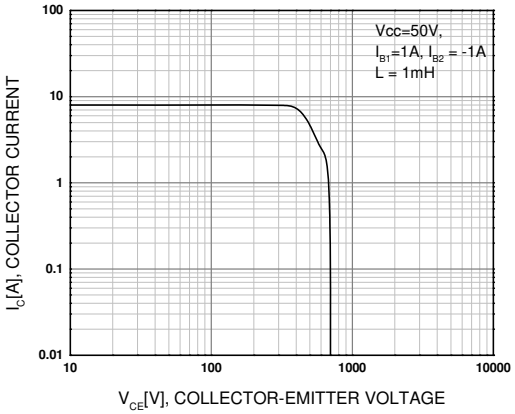


Figure 7. Reverse Biased Safe Operating Area

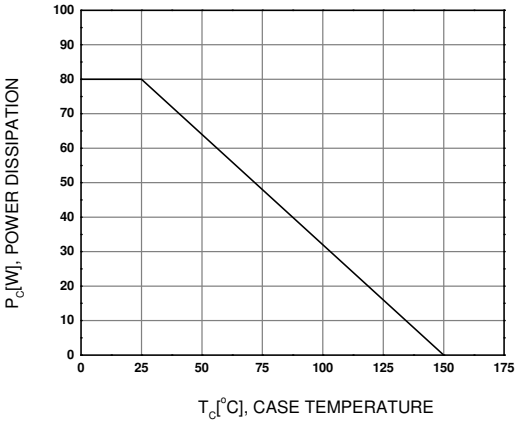


Figure 8. Power Derating

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800−282−9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81−3−5817−1050

ON Semiconductor Website: **www.onsemi.com**

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative