NPN Epitaxial Silicon Transistor

2N6517

Features

- High Voltage Transistor
- Collector Dissipation: PC(max) = 625 mW
- Complement to 2N6520
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)

ABSOLUTE MAXIMUM RATINGS

(Values are at $T_A = 25^{\circ}C$ unless otherwise noted.)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage 2N6517 2N6517C	350 400	V
V _{CEO}	Collector-Emitter Voltage 2N6517 2N6517C	350 400	V
V _{EBO}	Emitter-Base Voltage	6	V
Ι _C	Collector Current	500	mA
P _C	Collector Power Dissipation	625	mW
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 ~ 150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



ON Semiconductor®

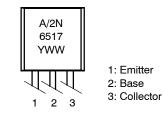
www.onsemi.com



TO-92 3 4.825x4.76 CASE 135AN

TO-92 3 4.83x4.76 LEADFORMED CASE 135AR

MARKING DIAGRAM



А	= Assembly Code
2N6517/2N6517C	= Device Code
YWW	= Date Code

ORDERING INFORMATION

Device	Package	Shipping
2N6517BU	TO-92 3 (Pb-Free)	10000 / Bulk Bag
2N6517TA	TO-92 3 (Pb-Free)	2000 / Fan-Fold
2N6517CTA	TO-92 3 (Pb-Free)	2000 / Fan-Fold

ELECTRICAL CHARACTERISTICS

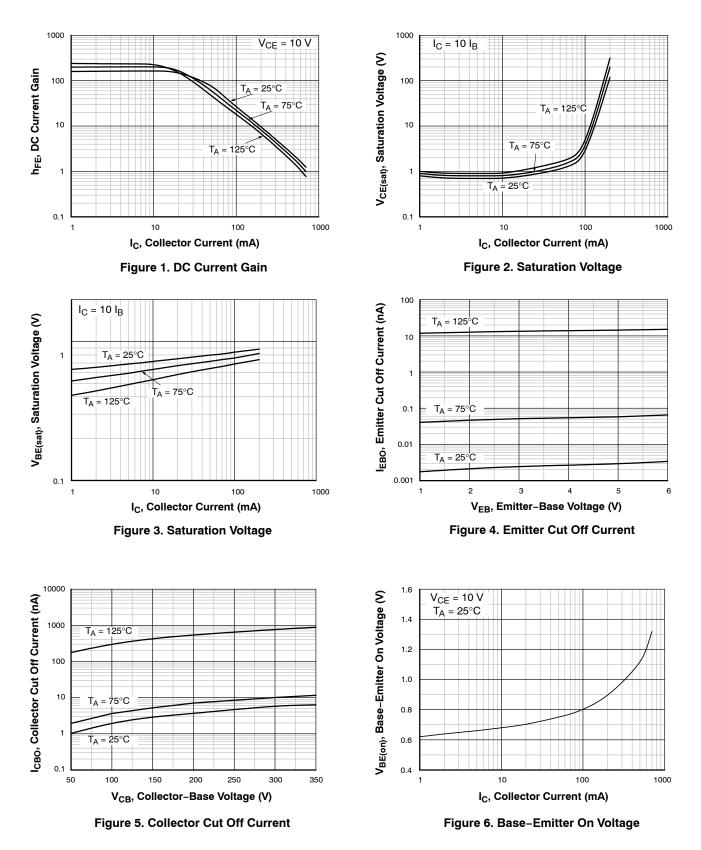
(Values are at $T_A = 25^{\circ}C$ unless otherwise noted.)

Symbol	Parameter	Conditions	Min.	Max.	Unit
BV _{CBO}	Collector-Base Breakdown Voltage 2N6517 2N6517C	$ I_{C} = 100 \ \mu A, \ I_{E} = 0 \\ I_{C} = 100 \ \mu A, \ I_{E} = 0 $	350 400		V
BV _{CEO}	Collector-Emitter Breakdown Voltage* 2N6517 2N6517C	$I_{C} = 1 \text{ mA}, I_{B} = 0$ $I_{C} = 1 \text{ mA}, I_{B} = 0$	350 400		V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 10 μA, I _C = 0	6	-	V
I _{CBO}	Collector Cut-Off Current	$V_{CB} = 250 \text{ V}, \text{ I}_{E} = 0$	-	50	nA
I _{EBO}	Emitter Cut-Off Current	$V_{EB} = 5 V, I_{C} = 0$	-	50	nA
h _{FE}	DC Current Gain* 2N6517/2N6517C 2N6517/2N6517C 2N6517/2N6517C 2N6517/2N6517C 2N6517/2N6517C 2N6517C 2N6517C		20 30 30 20 15 50	_ 200 200 _ 200	
V _{CE} (sat)	Collector-Emitter Saturation Voltage			0.3 0.35 0.5 1	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	$I_{C} = 10 \text{ mA}, I_{B} = 1 \text{ mA}$ $I_{C} = 20 \text{ mA}, I_{B} = 2 \text{ mA}$ $I_{C} = 30 \text{ mA}, I_{B} = 3 \text{ mA}$		0.75 0.85 0.9	V
C _{ob}	Output Capacitance	$V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	-	6	pF
f _T	Current Gain Bandwidth Product*	I_{C} = 10 mA, V_{CE} = 20 V, f = 20 MHz	40	200	MHz
V _{BE} (on)	Base-Emitter On Voltage	I _C = 100 mA, V _{CE} = 10 V,	_	2	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. *Pulse Test: Pulse Width \leq 300 µs, Duty Cycle \leq 2%

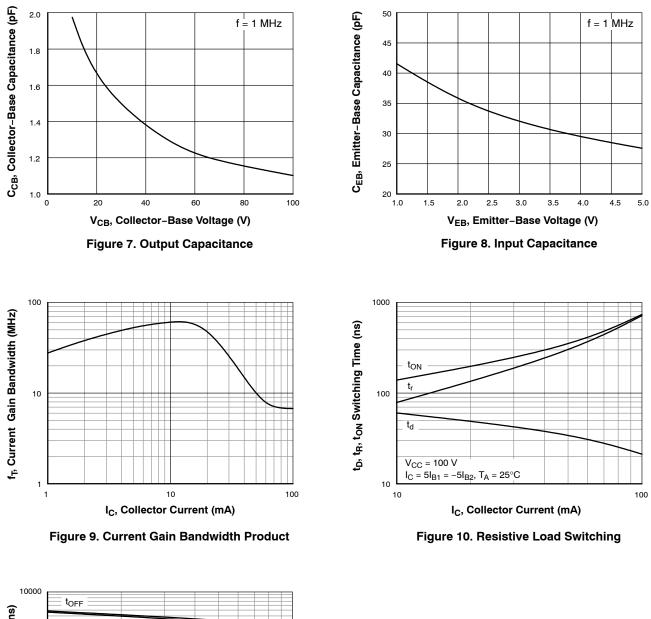
2N6517

TYPICAL PERFORMANCE CHARACTERISTICS



2N6517

TYPICAL PERFORMANCE CHARACTERISTICS (Continued)



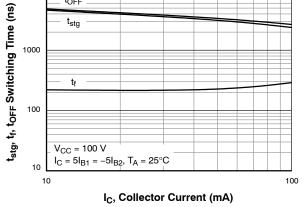
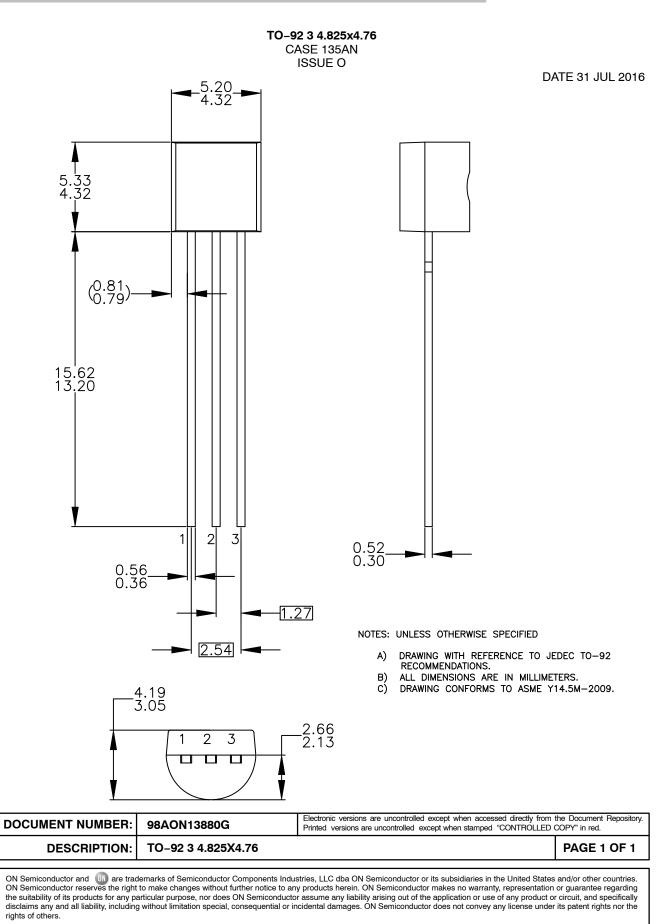


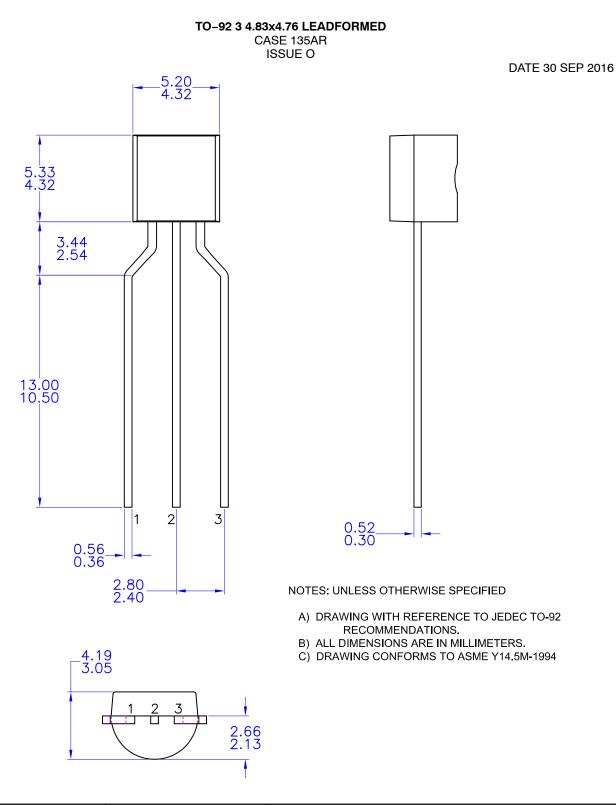
Figure 11. Resistive Load Switching





© Semiconductor Components Industries, LLC, 2019





DOCUMENT NUMBER:	98AON13879G	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.		
DESCRIPTION:	TO-92 3 4.83X4.76 LEADFORMED		PAGE 1 OF 1	
ON Semiconductor and 🕅 are trademarks of Semiconductor Components Industries. LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries.				

ON Semiconductor and ware trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. ON Semiconductor does not convey any license under its patent rights nor the rights of others.

onsemi, ONSEMI, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "onsemi" or its affiliates and/or subsidiaries in the United States and/or other countries. onsemi owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of onsemi's product/patent coverage may be accessed at <u>www.onsemi.com/site/pdf/Patent_Marking.pdf</u>. onsemi reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and onsemi makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or indental damages. Buyer is responsible for its products and applications using onsemi products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by onsemi. "Typical" parameters which may be provided in onsemi data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. onsemi does not convey any license under any of its intellectual property rights nor the rights of others. onsemi products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification. Buyer shall indemnify and hold onsemi and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs,

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:

Technical Library: www.onsemi.com/design/resources/technical-documentation onsemi Website: www.onsemi.com

ONLINE SUPPORT: <u>www.onsemi.com/support</u> For additional information, please contact your local Sales Representative at <u>www.onsemi.com/support/sales</u>