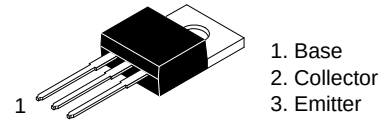


NPN Epitaxial Silicon Transistor

KSD526



TO-220-3LD
CASE 340AT

Features

- Complement to KSB596
- This is a Pb-Free Device

Applications

- Power Amplifier Applications

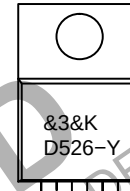
ABSOLUTE MAXIMUM RATINGS* ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	4	A
I_B	Base Current	0.4	A
P_C	Collector Dissipation ($T_C = 25^\circ\text{C}$)	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

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.

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

MARKING DIAGRAM



&3 = Date Code
&K = Lot Traceability Code
D526-Y = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping
KSD526Y	TO-220-3LD (Pb-Free)	1200 Units / Bulk Bag
KSD526YTU	TO-220-3LD (Pb-Free)	1000 Units / Tube

KSD526

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Characteristic	Test Condition	Min	Typ	Max	Unit
I_{CBO}	Collector Cut-off Current	$V_{CB} = 80\text{ V}, I_E = 0$			30	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{ V}, I_C = 0$			100	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 50\text{ mA}, I_B = 0$	80			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 10\text{ mA}, I_C = 0$	5			V
h_{FE}	DC Current Gain	$V_{CE} = 5\text{ V}, I_C = 0.5\text{ A}$ $V_{CE} = 5\text{ V}, I_C = 3\text{ A}$	40 15	50	240	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 3\text{ A}, I_B = 0.3\text{ A}$		0.45	1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 5\text{ V}, I_C = 3\text{ A}$		1	1.5	V
f_T	Current Gain - Bandwidth Product	$V_{CE} = 5\text{ V}, I_C = 0.5\text{ A}$	3	8		MHz
C_{cb}	Collector Output Capacitance	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		90		pF

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.

h_{FE} CLASSIFICATION

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

TYPICAL CHARACTERISTICS

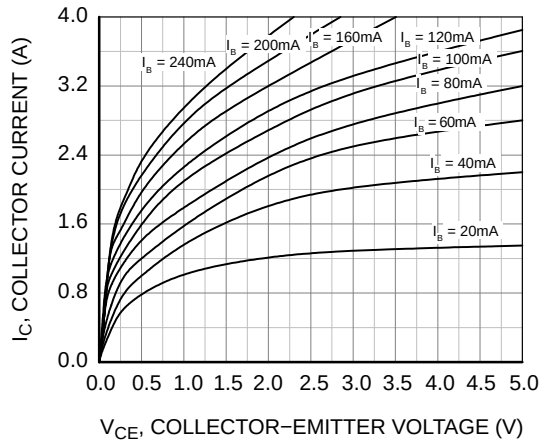


Figure 1. Static Characteristic

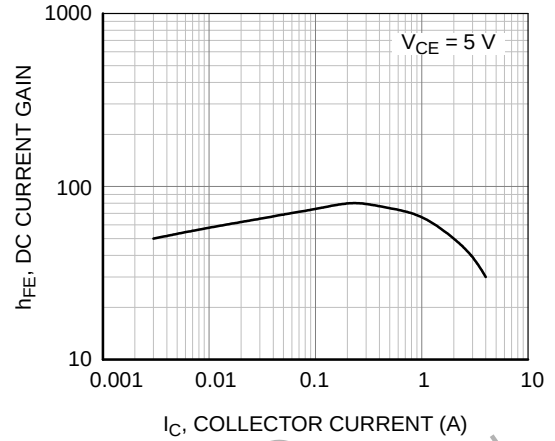


Figure 2. DC Current Gain

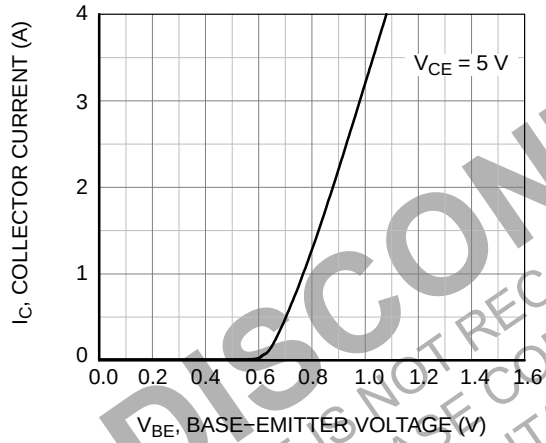


Figure 3. Base-Emitter On Voltage

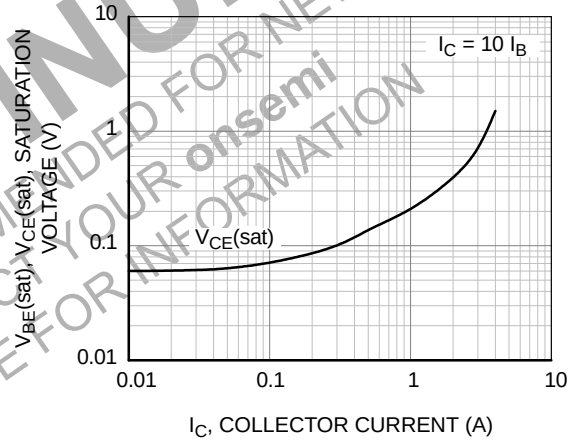


Figure 4. Collector-Emitter Saturation Voltage

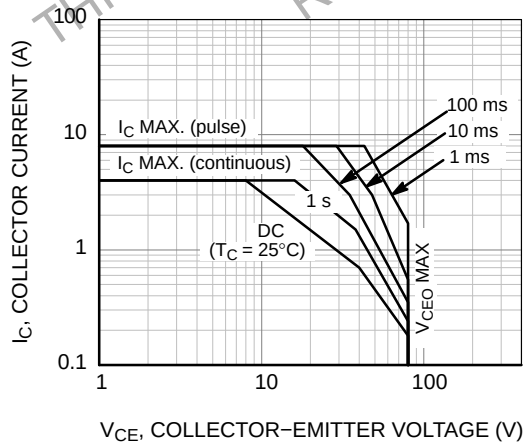


Figure 5. Safe Operating Area

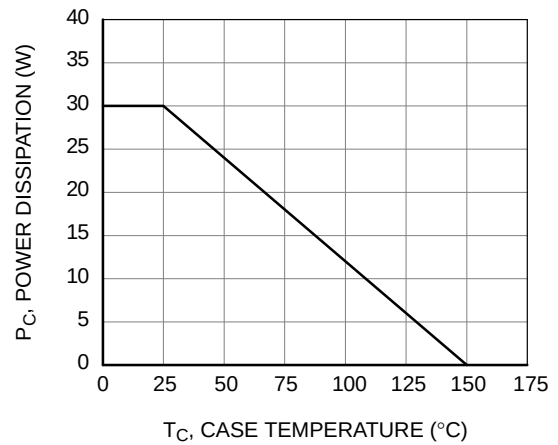
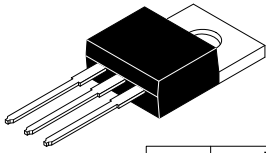


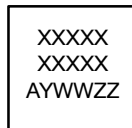
Figure 6. Power Derating


TO-220-3LD
CASE 340AT
ISSUE B

DATE 08 AUG 2022

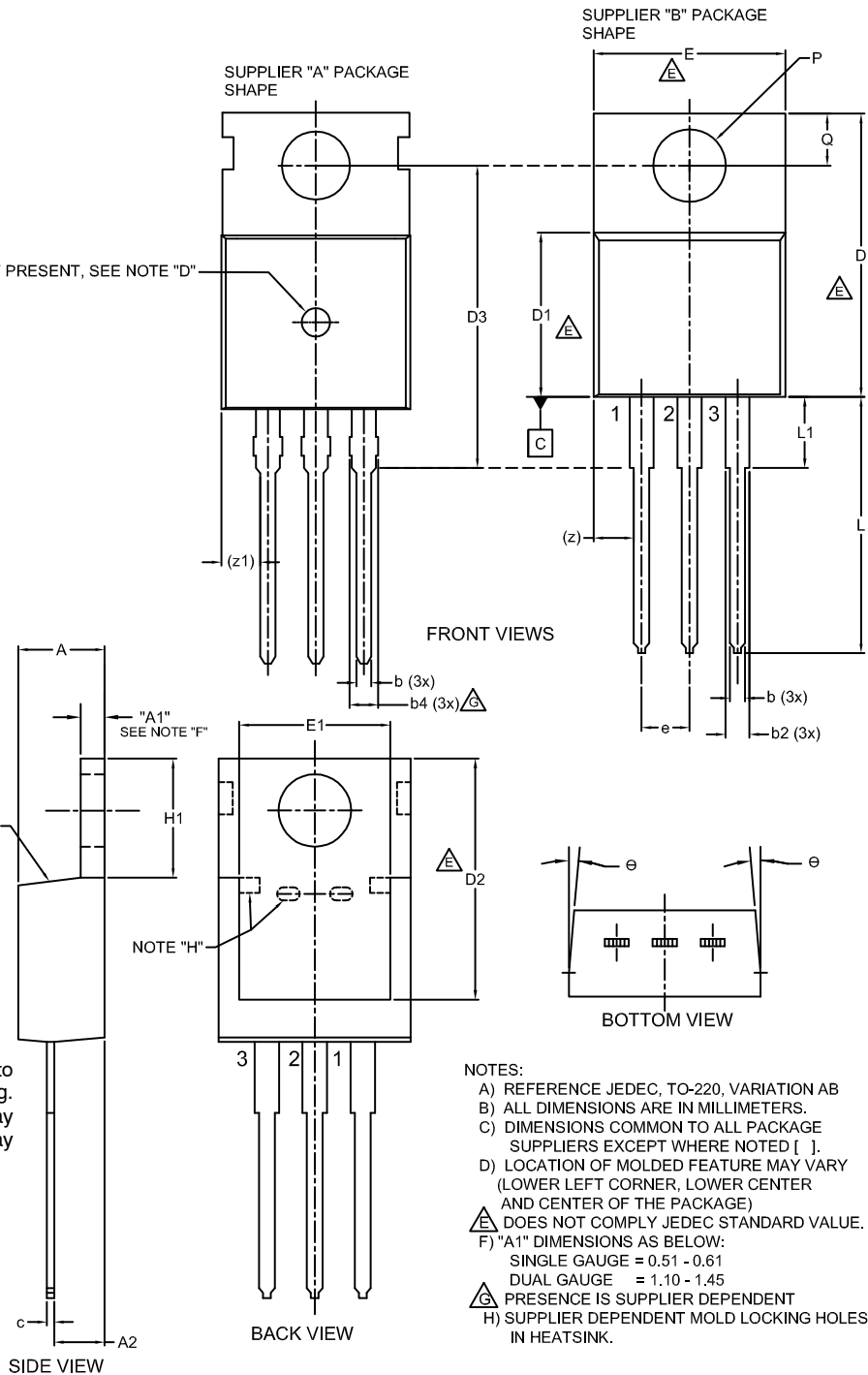
DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	4.00	--	4.70
A1	SEE NOTE "F"		
A2	2.10	--	2.85
b	0.55	--	1.00
b2	1.10	--	1.62
b4	1.42	--	1.62
c	0.36	--	0.60
D	13.90	--	16.30
D1	8.13	--	9.40
D2	11.50	--	14.30
D3	15.42	--	16.51
E	9.65	--	10.67
E1	7.59	--	8.65
e	2.40	--	2.67
H1	6.06	--	6.69
L	12.70	--	14.04
L1	2.70	--	4.10
P	3.50	--	4.00
Q	2.50	--	3.40
z	2.13 REF		
z1	2.06 REF		
θ	3°	--	5°

IF PRESENT, SEE NOTE "D"

GENERIC
MARKING DIAGRAM*


XXXX = Specific Device Code
A = Assembly Location
Y = Year
WW = Work Week
ZZ = Assembly Lot Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.



DOCUMENT NUMBER:	98AON13818G	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-220-3LD	PAGE 1 OF 1

onsemi and onsemi are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the 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 incidental damages. onsemi 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 www.onsemi.com/site/pdf/Patent-Marking.pdf. **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 incidental 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 in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use **onsemi** products for any such unintended or unauthorized application, Buyer shall indemnify and hold **onsemi** and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that **onsemi** was negligent regarding the design or manufacture of the part. **onsemi** is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:

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

ONLINE SUPPORT: www.onsemi.com/support

For additional information, please contact your local Sales Representative at
www.onsemi.com/support/sales