

DDA (xxxx) H

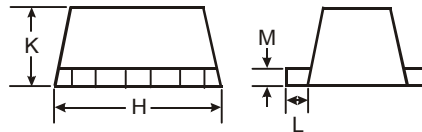
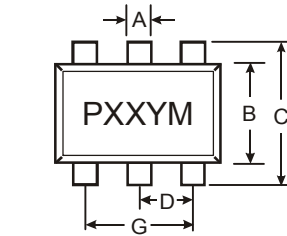
PNP PRE-BIASED SMALL SIGNAL DUAL SURFACE MOUNT TRANSISTOR

Features

- Epitaxial Planar Die Construction
- Complementary NPN Types Available (DDC)
- Built-In Biasing Resistors
- **Lead Free By Design/RoHS Compliant (Note 3)**
- **"Green" Device (Note 4 and 5)**

Mechanical Data

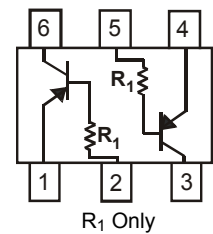
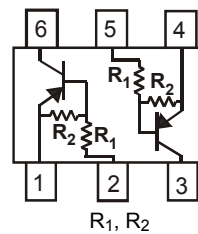
- Case: SOT-563
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram
- Weight: 0.005 grams (approximate)



SOT-563			
Dim	Min	Max	Typ
A	0.15	0.30	0.25
B	1.10	1.25	1.20
C	1.55	1.70	1.60
D	0.50		
G	0.90	1.10	1.00
H	1.50	1.70	1.60
K	0.56	0.60	0.60
L	0.15	0.25	0.20
M	0.10	0.18	0.11
All Dimensions in mm			

SEE NOTE 1

P/N	R1	R2	MARKING
DDA124EH	22KΩ	22KΩ	P17
DDA144EH	47KΩ	47KΩ	P20
DDA143EH	4.7KΩ	4.7KΩ	P08
DDA114YH	10KΩ	47KΩ	P14
DDA123JH	2.2KΩ	47KΩ	P06
DDA114EH	10KΩ	10KΩ	P13
DDA143TH	4.7KΩ	—	P07
DDA114TH	10KΩ	—	P12



SCHEMATIC DIAGRAM, TOP VIEW

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Supply Voltage (6) to (1) and (3) to (4)	V _{CC}	-50	V
Input Voltage (2) to (1) and (5) to (4)	V _{IN}	DDA124EH +10 to -40 DDA144EH +10 to -40 DDA143EH +10 to -30 DDA114YH +6 to -40 DDA123JH +5 to -12 DDA114EH +10 to -40 DDA143TH +5V max DDA114TH +5V max	V
Output Current	I _O	DDA124EH -30 DDA144EH -30 DDA143EH -100 DDA114YH -70 DDA123JH -100 DDA114EH -50 DDA143TH -100 DDA114TH -100	mA
Output Current All	I _C (Max)	-100	mA
Power Dissipation	P _d	150	mW
Thermal Resistance, Junction to Ambient Air (Note 2)	R _{θJA}	833	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

- Notes:
1. Package is non-polarized. Parts may be on reel in orientation illustrated, 180° rotated, or mixed (both ways).
 2. Mounted on FR4 Board with recommended pad layout at <http://www.diodes.com/datasheets/ap02001.pdf>.
 3. No purposefully added lead.
 4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 5. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

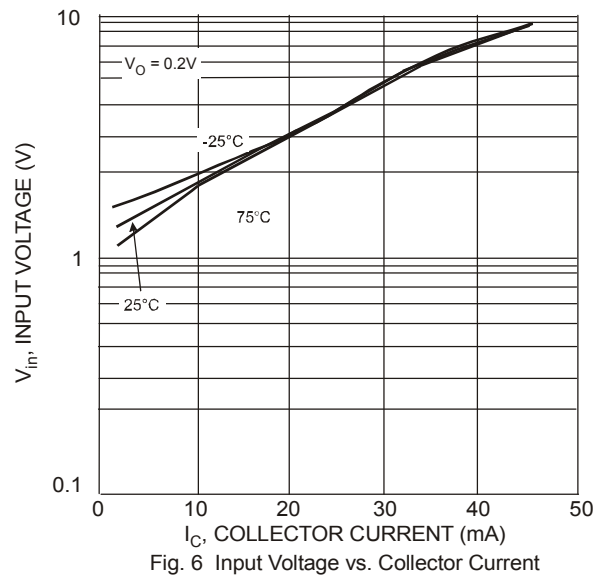
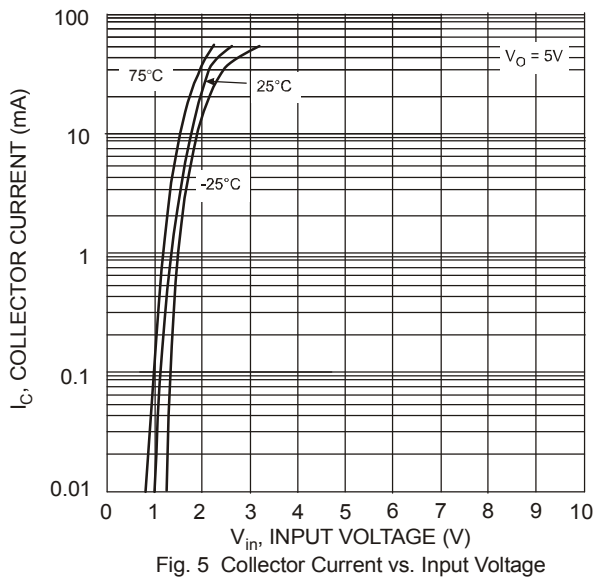
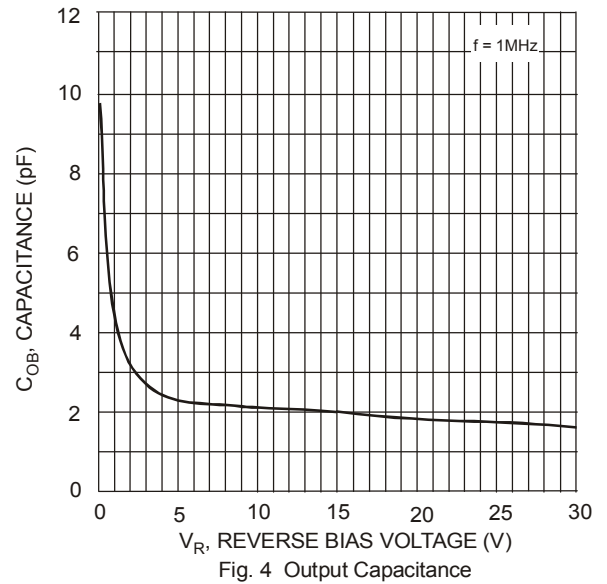
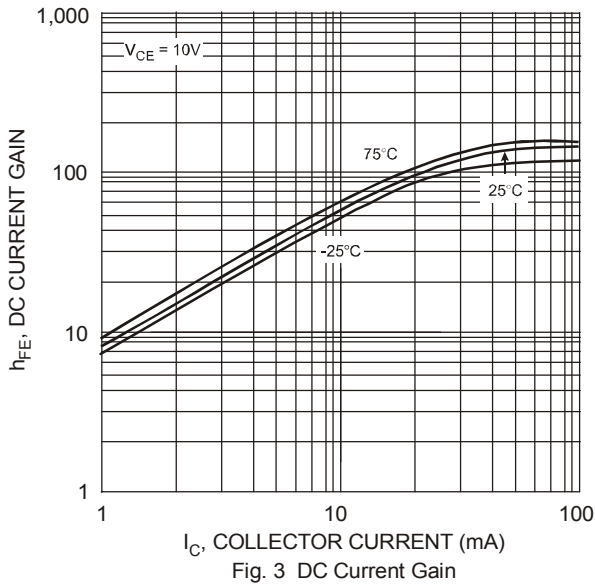
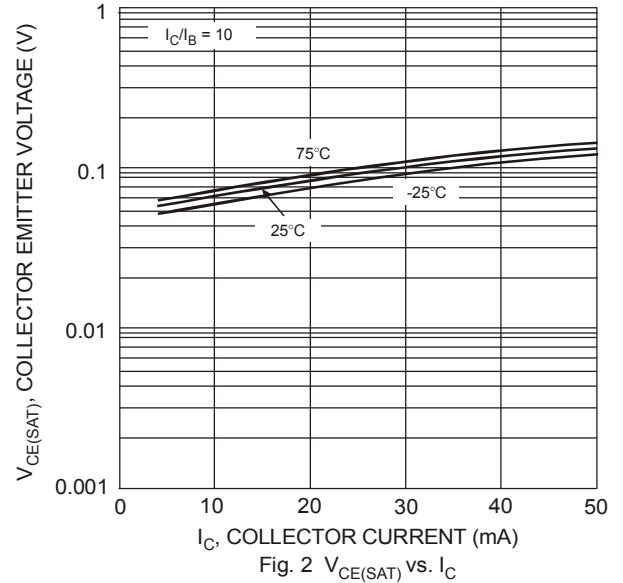
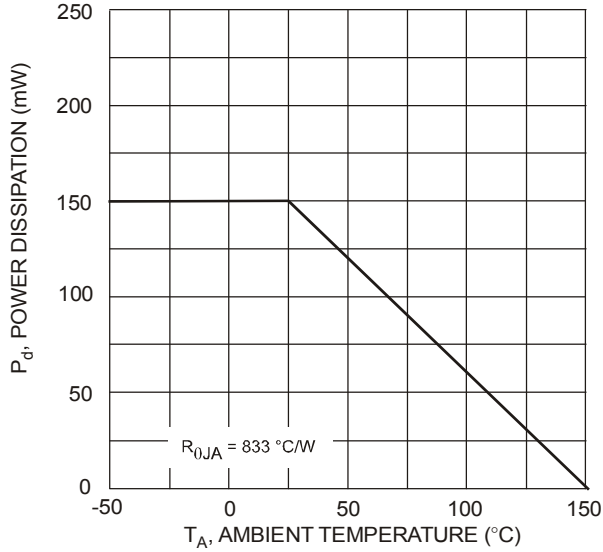
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic (DDA143TH & DDA114TH only)	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	BV _{CBO}	-50	—	—	V	I _C = -50μA
Collector-Emitter Breakdown Voltage	BV _{CEO}	-50	—	—	V	I _C = -1mA
Emitter-Base Breakdown Voltage	BV _{EBO}	-5	—	—	V	I _E = -50μA
Collector Cutoff Current	I _{CBO}	—	—	-0.5	μA	V _{CB} = -50V
Emitter Cutoff Current	I _{EBO}	—	—	-0.5	μA	V _{EB} = -4V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	—	—	-0.3	V	I _C /I _B = -2.5mA / -0.25mA DDA143TH I _C /I _B = -1mA / -0.1mA DDA114TH
DC Current Transfer Ratio	h _{FE}	100	250	600	—	I _C = -1mA, V _{CE} = -5V
Gain-Bandwidth Product*	f _T	—	250	—	MHz	V _{CE} = -10V, I _E = 5mA, f = 100MHz

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	-0.5	-1.1	—	V	V _{CC} = -5V, I _O = -100μA
		-0.5	-1.1	—		
		-0.5	-1.1	—		
		-0.3	—	—		
		-0.5	—	—		
		-0.5	-1.1	—		
Input Voltage	V _{I(on)}	—	-1.9	-3.0	V	V _O = -0.3V, I _O = -5mA
		—	-1.9	-3.0		V _O = -0.3V, I _O = -2mA
		—	-1.9	-3.0		V _O = -0.3V, I _O = -20mA
		—	—	-1.4		V _O = -0.3V, I _O = -1mA
		—	—	-1.1		V _O = -0.3V, I _O = -5mA
		—	-1.9	-3.0		V _O = -0.3V, I _O = -10mA
Output Voltage	V _{O(on)}	—	-0.1	-0.3	V	I _O /I _I = -10mA / -0.5mA
		—	-0.1	-0.3		I _O /I _I = -10mA / -0.5mA
		—	-0.1	-0.3		I _O /I _I = -10mA / -0.5mA
		—	-0.1	-0.3		I _O /I _I = -5mA / -0.25mA
		—	-0.1	-0.3		I _O /I _I = -5mA / -0.25mA
		—	-0.1	-0.3		I _O /I _I = -10mA / -0.5mA
Input Current	I _I	—	—	-0.36	mA	V _I = -5V
		—	—	-0.18		
		—	—	-1.8		
		—	—	-0.88		
		—	—	-3.6		
		—	—	-0.88		
Output Current	I _{O(off)}	—	—	-0.5	μA	V _{CC} = -50V, V _I = -0V
DC Current Gain	G _I	56	—	—	—	V _O = -5V, I _O = -5mA
		68	—	—		V _O = -5V, I _O = -5mA
		20	—	—		V _O = -5V, I _O = -10mA
		68	—	—		V _O = -5V, I _O = -10mA
		80	—	—		V _O = -5V, I _O = -10mA
		30	—	—		V _O = -5V, I _O = -5mA
Gain-Bandwidth Product*	f _T	—	250	—	MHz	V _{CE} = -10V, I _E = -5mA, f = 100MHz

* Transistor - For Reference Only

Typical Curves - DDA143EH

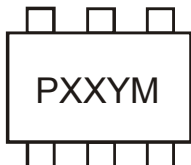


Ordering Information (Note 6)

Device	Packaging	Shipping
DDA124EH-7	SOT-563	3000/Tape & Reel
DDA144EH-7	SOT-563	3000/Tape & Reel
DDA143EH-7	SOT-563	3000/Tape & Reel
DDA114YH-7	SOT-563	3000/Tape & Reel
DDA123JH-7	SOT-563	3000/Tape & Reel
DDA114EH-7	SOT-563	3000/Tape & Reel
DDA143TH-7	SOT-563	3000/Tape & Reel
DDA114TH-7	SOT-563	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



PXX = Product Type Marking Code (See Page 1)

YM = Date Code Marking

Y = Year ex: T = 2006

M = Month ex: 9 = September

Date Code Key

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.



**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331