

HIGH VOLTAGE NPN TRANSISTOR

APT27H

General Description

The APT27H series are high voltage, high speed switching NPN power transistor specially designed for off-line switch mode power supplies with low output power.

The APT27H is available in TO-92 package.

Features

- High Switching Speed
- High Collector-Emitter Voltage
- Low Cost

Applications

- Battery Chargers for Mobile Phone
- Power Supply for DVD/STB

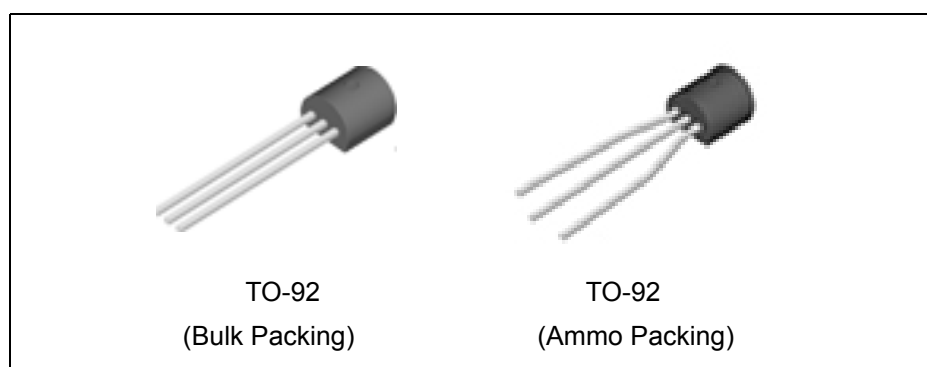


Figure 1. Package Types of APT27H

Pin Configuration

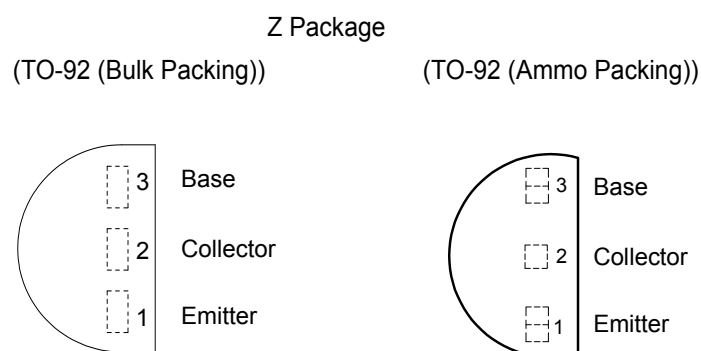
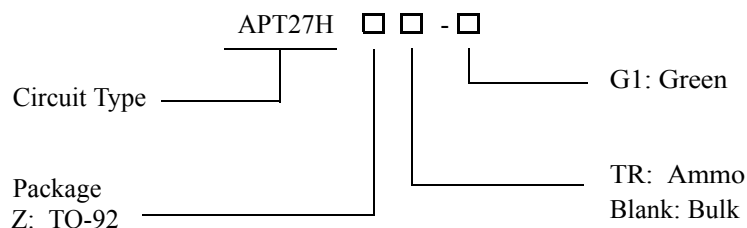


Figure 2. Pin Configuration of APT27H (Top View)

**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Ordering Information**

Package	Part Number	Marking ID	Packing Type
TO-92	APT27HZ-G1	APT27HZ-G1	Bulk
	APT27HZTR-G1	APT27HZ-G1	Ammo

BCD Semiconductor's products, as designated with "G1" suffix in the part number, are RoHS compliant and Green.

Absolute Maximum Ratings (Note 1)

Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CES}	800	V
Collector-Emitter Voltage	V_{CEO}	450	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current	I_C	0.8	A
Collector Peak Current	I_{CM}	1.6	A
Base Current	I_B	0.4	A
Base Peak Current	I_{BM}	0.8	A
Power Dissipation, $T_A=25^{\circ}\text{C}$	P_{TOT}	0.8	W
Operating Junction Temperature		150	$^{\circ}\text{C}$
Storage Temperature Range		-55 to 150	$^{\circ}\text{C}$

Note 1: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.

**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Thermal Characteristics**

Parameter	Symbol	Value	Unit
Thermal Resistance (Junction to Ambient)	θ_{JA}	156.25	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics($T_C=25^{\circ}\text{C}$, unless otherwise specified.)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector Cut-off Current ($V_{BE}=-1.5\text{V}$)	I_{CEV}	$V_{CE}=800\text{V}$			10	μA
Collector-Emitter Sustaining Voltage ($I_B=0$)	$V_{CEO}(\text{sus})$	$I_C=0.1\text{mA}$	450			V
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C=200\text{mA}$, $I_B=40\text{mA}$			0.5	V
DC Current Gain	h_{FE}	$I_C=100\text{mA}$, $V_{CE}=10\text{V}$	15	23	40	
		$I_C=300\text{mA}$, $V_{CE}=10\text{V}$	6	15	30	

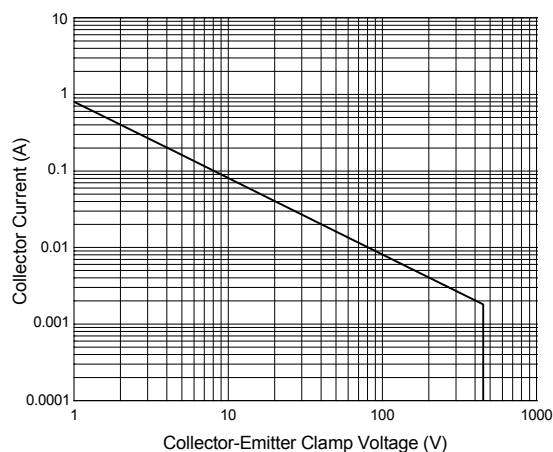
**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Typical Performance Characteristics**

Figure 3. Safe Operating Areas

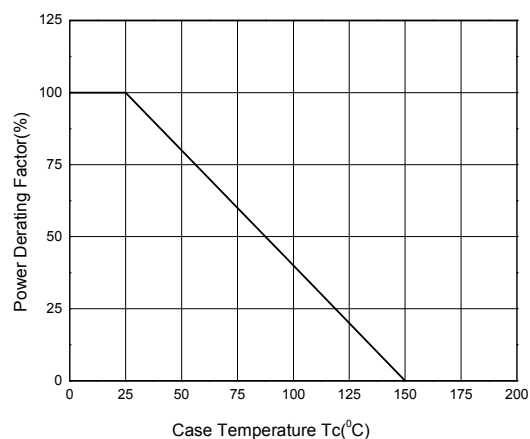


Figure 4. Power Derating Curve

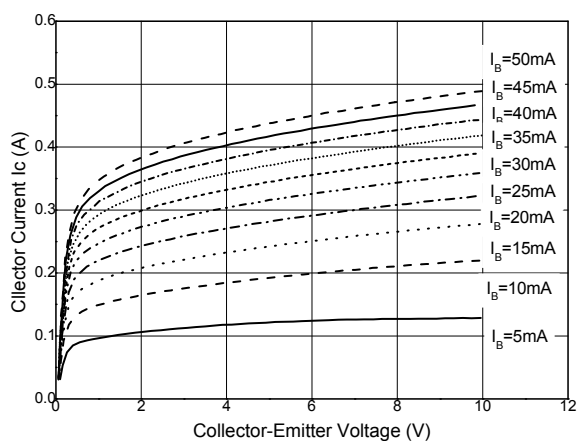


Figure 5. Static Characteristics

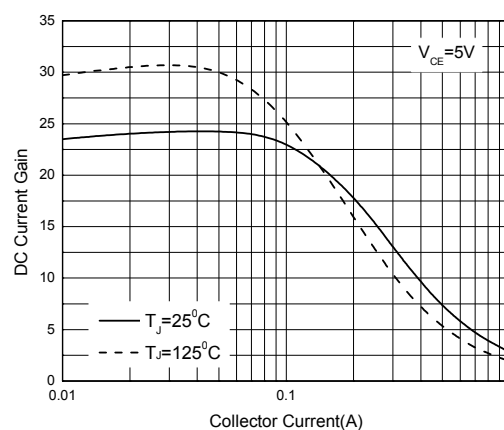


Figure 6. DC Current Gain

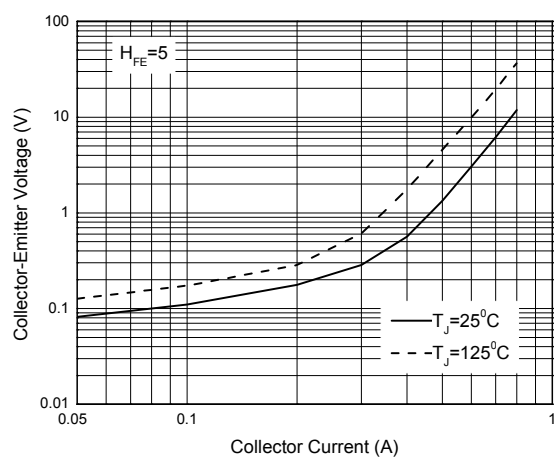
**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Typical Performance Characteristics (Continued)**

Figure 7. Collector-emitter Saturation Region

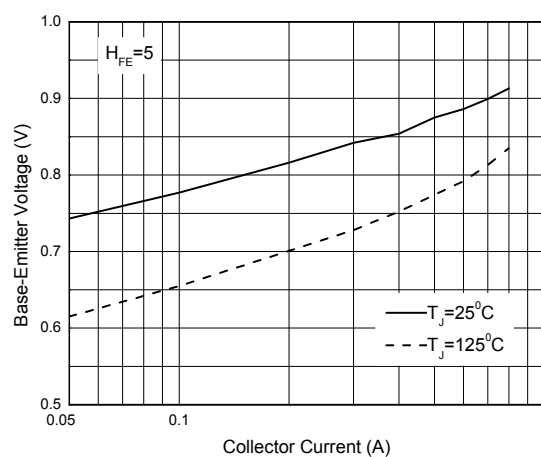
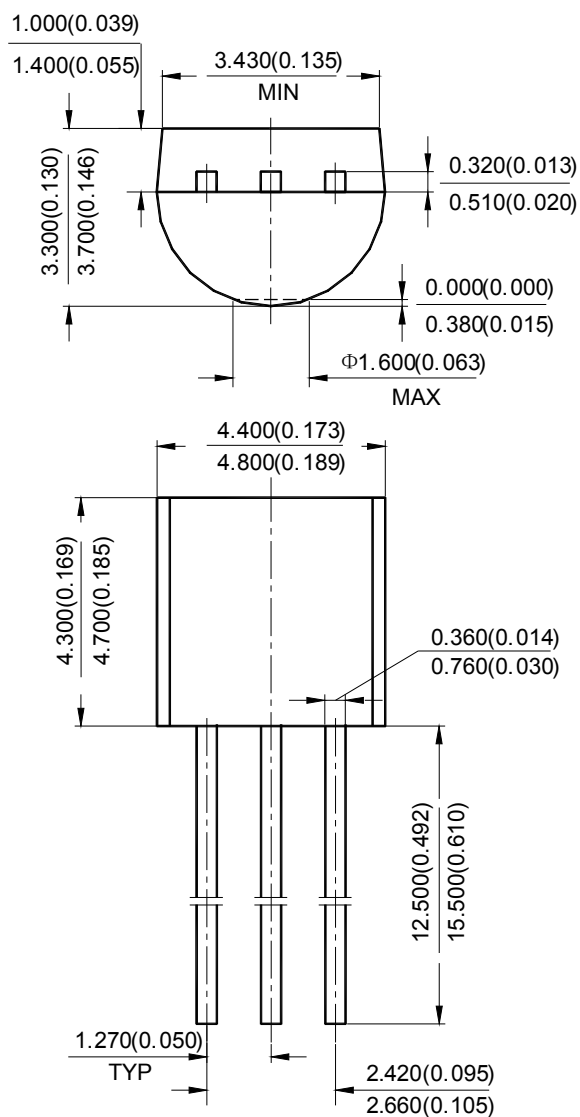
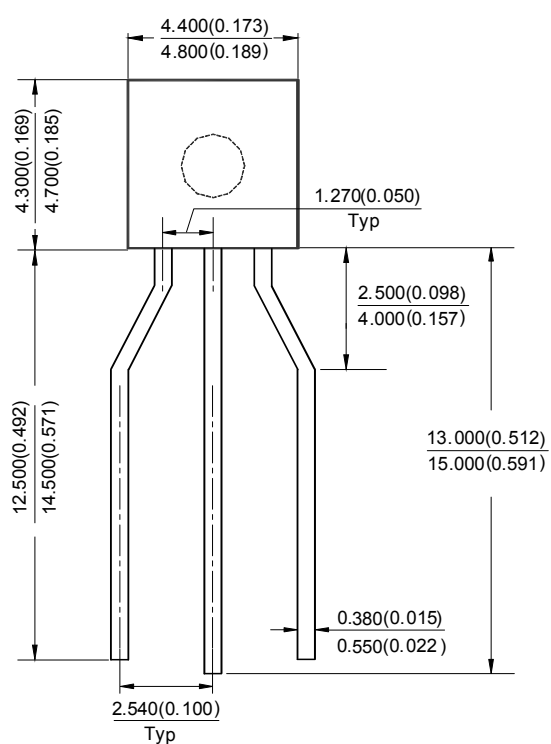
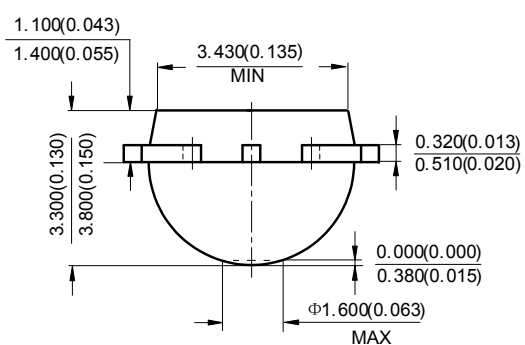


Figure 8. Base-Emitter Saturation Voltage

**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Mechanical Dimensions****TO-92 (Bulk Packing)****Unit: mm(inch)**

**HIGH VOLTAGE NPN TRANSISTOR****APT27H****Mechanical Dimensions (Continued)****TO-92 (Ammo Packing)****Unit: mm(inch)**



BCD Semiconductor Manufacturing Limited

<http://www.bcdsemi.com>

IMPORTANT NOTICE

BCD Semiconductor Manufacturing Limited reserves the right to make changes without further notice to any products or specifications herein. BCD Semiconductor Manufacturing Limited does not assume any responsibility for use of any its products for any particular purpose, nor does BCD Semiconductor Manufacturing Limited assume any liability arising out of the application or use of any its products or circuits. BCD Semiconductor Manufacturing Limited does not convey any license under its patent rights or other rights nor the rights of others.

MAIN SITE

- Headquarters

BCD Semiconductor Manufacturing Limited

No. 1600, Zi Xing Road, Shanghai ZiZhu Science-based Industrial Park, 200241, China
Tel: +86-21-24162266, Fax: +86-21-24162277

- Wafer Fab

Shanghai SIM-BCD Semiconductor Manufacturing Co., Ltd.

800 Yi Shan Road, Shanghai 200233, China
Tel: +86-21-6485 1491, Fax: +86-21-5450 0008

REGIONAL SALES OFFICE

Shenzhen Office

Shanghai SIM-BCD Semiconductor Manufacturing Co., Ltd., Shenzhen Office

Unit A Room 1203, Skyworth Bldg., Gaoxin Ave. I.S., Nanshan District, Shenzhen, China
Tel: +86-755-8826 7951
Fax: +86-755-8826 7865

Taiwan Office

BCD Semiconductor (Taiwan) Company Limited

4F, 298-1, Rui Guang Road, Nei-Hu District, Taipei, Taiwan
Tel: +886-2-2656 2808
Fax: +886-2-2656 2806

USA Office

BCD Semiconductor Corp.

30920 Huntwood Ave. Hayward, CA 94544, USA
Tel : +1-510-324-2988
Fax: +1-510-324-2788

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9