

Semiconductor & Storage Products Company

NPN Bipolar Transistors for AC Adaptors and DC-DC Converters: TTC008, TTC012

We have developed NPN bipolar transistors for AC adaptors and DC-DC converters. The product lineup includes the TTC008 (for AC100 V power supply) and the TTC012 (for AC200 V power supply), which have a higher current rating than our well received products for the same purpose, the 2SC6010 (for AC100 V power supply) and the 2SC6042 (for AC200 V power supply). Since they have a higher current rating than the previous models, they can be used for higher output AC adaptors.



New PW-Mold2

Features

High-speed switching

High collector-emitter voltage

High current amplification factor (h_{FE}) h_{FE} =100 to 200 (V_{CE} =5V, I_C =0.3A)

The products are standardized for low current ($I_C=1mA$) h_{FE} and so they have excellent low temperature start-up characteristics: $h_{FE} = 80 \text{ (min)} (V_{CE}=5V, I_C=1mA)$

Uses

high-speed high-voltage switching

switching regulators

high-speed DC-DC converters





Circuit Example

AC adaptors, self-excited DC-DC converters





Lineup

Lineup of Bipolar	Transistors for	AC Adaptors and	DC-DC Converters
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Purpose	Package	Part number	V _{CBO} (V)	V _{CEO} (V)	I _C (A)	$h_{\rm FE}$
AC100V power supply	New PW-Mold2	TTC003	600	400	3	20 to 60 (@V _{CE} =5V, I _C =0.3A)
		TTC008 (*1)	600	285	1.5	100 to 200 (@V _{CE} =5V, I _C =0.3A)
	MSTM	2SC6010	600	285	1	100 to 200 (@ V_{CE} =5V, I _C =0.1A)
		2SC6034	600	285	1	125 to 250 (@V _{CE} =5V, I _C =0.1A)
		2SC5930	600	285	1	40 to 100 (@ V_{CE} =5V, I _C =0.2A)
AC200V power supply	New PW-Mold2	TTC012 ^(*1)	800	375	2	100 to 200 (@V _{CE} =5V, I _C =0.3A)
		2SC6142	800	375	1.5	100 to 200 (@V _{CE} =5V, I _C =0.1A)
	MSTM	2SC6042	800	375	1	100 to 200 (@V _{CE} =5V, I _C =0.1A)
		2SC6040	800	410	1	60 to 120 (@ V_{CE} =5V, I _C =0.1A)

*1: New product

Top of this page

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