

# PNP SILICON POWER TRANSISTOR

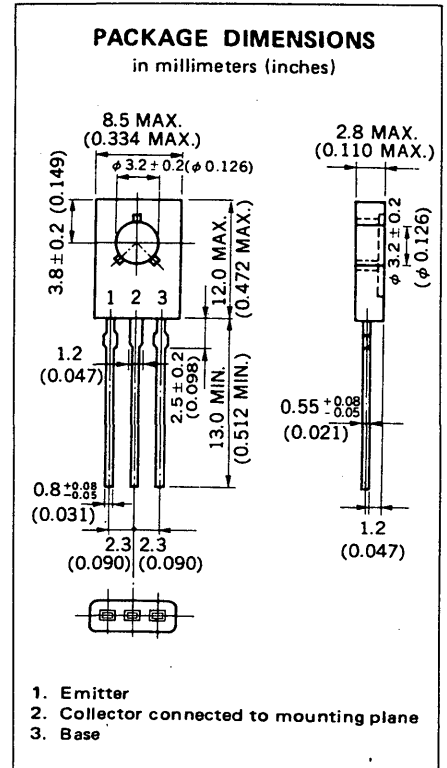
## 2SA1546

**DESCRIPTION** The 2SA1546 is designed for uses of high-resolution monitor TV applications. This makes it possible to raise the video band of high-resolution monitor TVs to 50 MHz.

- FEATURES**
- High  $f_T$ :  $f_T = 300$  MHz TYP. (@ $V_{CE} = -30$  V,  $I_E = 30$  mA)
  - Low  $C_{ob}$ :  $C_{ob} = 3.3$  pF (@ $V_{CB} = -30$  V)
  - High Voltage:  $V_{CBO} = V_{CEO} = -250$  V
  - High Total Power Dissipation:  
 $P_T$  ( $T_a/T_c = 25$  °C) = 1.3 W/7 W
  - Complementary to 2SC4001

**ABSOLUTE MAXIMUM RATINGS**

- Maximum Temperatures
- Storage Temperature ..... -55 to +150 °C
  - Junction Temperature ..... 150 °C Maximum
- Maximum Power Dissipation
- Total Power Dissipation ( $T_a = 25$  °C) ..... 1.3 W
  - Total Power Dissipation ( $T_c = 25$  °C) ..... 7 W
- Maximum Voltages and Current ( $T_a = 25$  °C)
- $V_{CBO}$  Collector to Base Voltage -250 V
  - $V_{CEO}$  Collector to Emitter Voltage -250 V
  - $V_{EBO}$  Emitter to Base Voltage -5.0 V
  - $I_C$  Collector Current -100 mA



**ELECTRICAL CHARACTERISTICS ( $T_a = 25$  °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
$h_{FE}$	DC Current Gain	60	150	320	-	$V_{CE} = -10$ V, $I_C = -10$ mA
$f_T$	Gain Bandwidth Product	200	300		MHz	$V_{CE} = -30$ V, $I_E = 30$ mA
$C_{ob}$	Output Capacitance		3.3	3.7	pF	$V_{CB} = -30$ V, $I_E = 0$ , $f = 1$ MHz
$I_{CBO}$	Collector Cutoff Current			100	nA	$V_{CB} = -200$ V, $I_E = 0$
$I_{EBO}$	Emitter Cutoff Current			100	nA	$V_{EB} = -3.0$ V, $I_C = 0$
$V_{CE(sat)}$	Collector Saturation Voltage		-0.12	-0.3	V	$I_C = -10$ mA, $I_B = -1.0$ mA
$V_{BE(sat)}$	Base Saturation Voltage		-0.73	-1.2	V	$I_C = -10$ mA, $I_B = -1.0$ mA
$V_{ESDR}$	Electrostatic Discharge-Resistant		800		V	$C = 1000$ pF, E-B Reverse Bias

\* Pulsed PW < 350  $\mu$ s, Duty Cycle < 2 %

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

