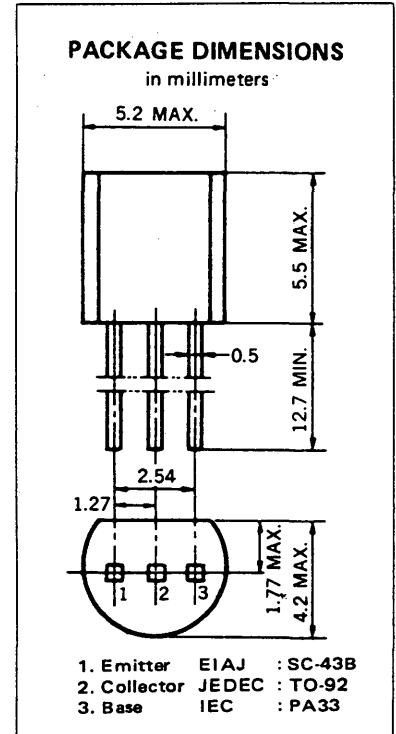


**DESCRIPTION** The 2SA1544 is designed for uses of high-resolution monitor TV applications. This makes it possible to raise the video band of high-resolution monitor TVs to 50 MHz.

- 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:  $P_T = 0.75$  W
  - Complementary to 2SC3999

**ABSOLUTE MAXIMUM RATINGS**

Maximum Temperatures	
Storage Temperature	..... -55 to +150 °C
Junction Temperature	..... 150 °C Maximum
Maximum Power Dissipation ( $T_a = 25$ °C)	
Total Power Dissipation	..... 750 mW
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 %

**Classification of  $h_{FE}$**

Rank	M	L	K
Range	60 to 120	100 to 200	160 to 320

Test Conditions:  $V_{CE} = -10$  V,  $I_C = -10$  mA

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

