

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)

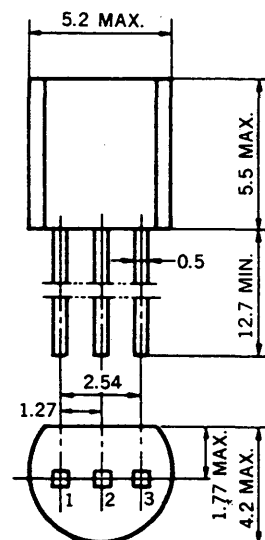
V_{CBO} Collector to Base Voltage -250 V

V_{CEO} Collector to Emitter Voltage -250 V

V_{EBO} Emitter to Base Voltage -5.0 V

I_C Collector Current -100 mA

PACKAGE DIMENSIONS in millimeters



1. Emitter EIAJ : SC-43B
2. Collector JEDEC : TO-92
3. Base IEC : PA33

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 μ 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 ($T_a = 25^\circ\text{C}$)