

DESCRIPTION The 2SA1376/2SA1376A is designed for general-purpose applications requiring high Breakdown Voltages.

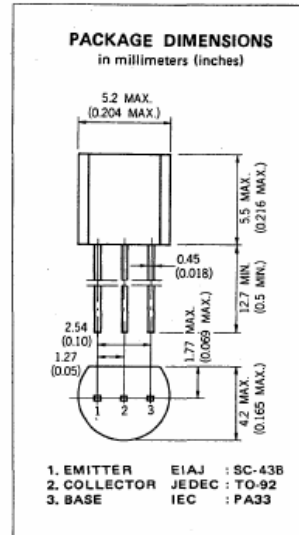
- FEATURES**
- High Breakdown Voltage.
 $V_{CEO} = -180\text{ V}/-200\text{ V}$ (2SA1376/2SA1376A)
 - Good h_{FE} linearity.
 - A Complementary pair with 2SC347B/2SC3478A.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures
 Storage Temperature -55 to $+150\text{ }^{\circ}\text{C}$
 Junction Temperature $150\text{ }^{\circ}\text{C}$ Maximum
 Maximum Power Dissipation ($T_a = 25\text{ }^{\circ}\text{C}$)
 Total Power Dissipation 750 mW
 Maximum Voltages and Currents ($T_a = 25\text{ }^{\circ}\text{C}$)

	2SA1376/2SA1376A	
V_{CBO}	Collector to Base Voltage . . .	-200 V
V_{CEO}	Collector to Emitter Voltage . . .	$-180/-200\text{ V}$
V_{EBO}	Emitter to Base Voltage . . .	-5.0 V
I_C	Collector Current (DC)	-100 mA
I_C	Collector Current (pulse)* . . .	-200 mA
I_B	Base Current (DC)	-20 mA

*PW $\leq 10\text{ ms}$, Duty Cycle $\leq 50\%$



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

2SA1376/2SA1376A

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	135		400/600	-	$V_{CE} = -10\text{ V}$, $I_C = -10\text{ mA}$
t_{on}	Turn-on Time		0.16		μs	$I_C = -10\text{ mA}$
t_{off}	Turn-off Time		1.5		μs	$I_{B1} = -I_{B2} = -1\text{ mA}$, $V_{CC} = -10\text{ V}$
f_T	Gain Bandwidth Product	80	120		MHz	$V_{CE} = -10\text{ V}$, $I_E = 10\text{ mA}$
C_{ob}	Output Capacitance		3.5	4.0	pF	$V_{CB} = -30\text{ V}$, $I_F = 0$, $f = 1.0\text{ MHz}$
I_{CBO}	Collector Cutoff Current			-100	nA	$V_{CB} = -200\text{ V}$, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			-100	nA	$V_{EB} = -4.0\text{ V}$, $I_C = 0$
V_{BE}	Base to Emitter Voltage	-600	-650	-700	mV	$V_{CE} = -10\text{ V}$, $I_C = -10\text{ mA}$
$V_{CE(sat)}$	Collector Saturation Voltage		-0.2	-0.3	V	$I_C = -50\text{ mA}$, $I_B = -5.0\text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage		-0.8	-1.2	V	$I_C = -50\text{ mA}$, $I_B = -5.0\text{ mA}$

Classification of h_{FE}

Rank	L	K	U**
Range	135 - 270	200 - 400	300 - 600

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

** 2SA1376A has no U rank.

