

**isc Silicon PNP Power Transistor**

**2SA1770**

**DESCRIPTION**

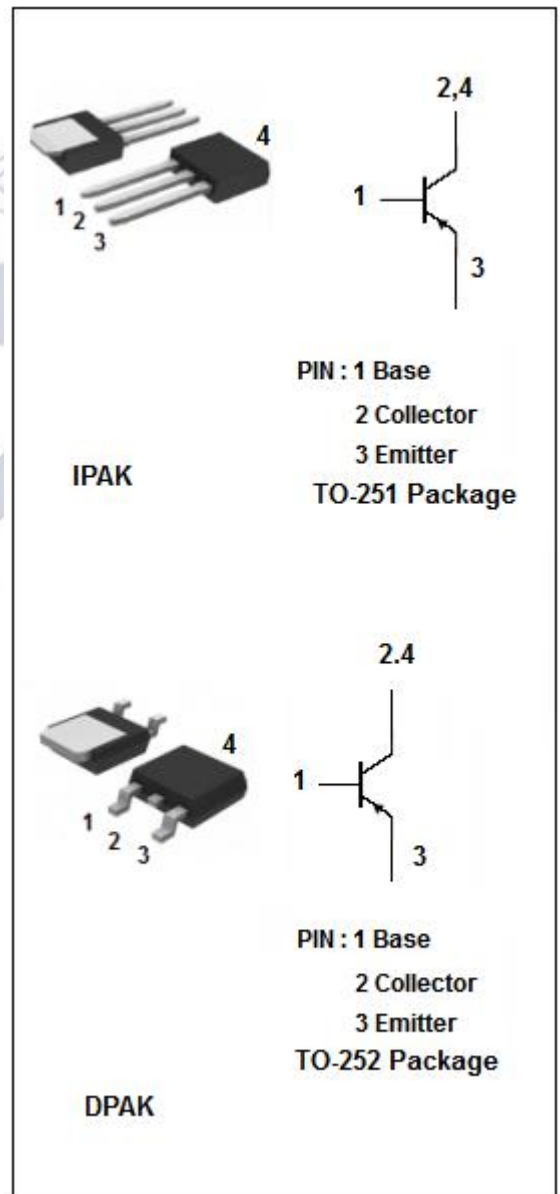
- High breakdown voltage and large current capacity
- Small and slim package permitting
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation
- Complementary to 2SC4614

**APPLICATIONS**

- High voltage switching application

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	-180	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-160	V
V <sub>EBO</sub>	Emitter-Base Voltage	-6	V
I <sub>C</sub>	Collector Current-Continuous	-1.5	A
I <sub>CM</sub>	Collector Current-Peak	-2.5	A
P <sub>C</sub>	Collector Power Dissipation @ T <sub>C</sub> =25°C	15	W
	Collector Power Dissipation @ T <sub>a</sub> =25°C	1.0	
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



**isc Silicon PNP Power Transistor****2SA1770****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -0.5\text{A}; I_B = -50\text{mA}$			-0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -0.5\text{A}; I_B = -50\text{mA}$			-1.2	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}; I_B = 0$	-160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}; I_C = 0$	-6			V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -120\text{V}; I_E = 0$			-1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -4\text{V}; I_C = 0$			-1.0	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -0.1\text{A}; V_{CE} = -5\text{V}$	100		400	
$h_{FE-2}$	DC Current Gain	$I_C = -10\text{mA}; V_{CE} = -5\text{V}$	80			
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 1.0\text{MHz}$		22		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C = -50\text{mA}; V_{CE} = -10\text{V}$		120		MHz

◆  **$h_{FE-1}$  Classifications**

R	S	T
100-200	140-280	200-400

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Outline Drawing

