

**isc Silicon PNP Power Transistor**

**2SB1203**

**DESCRIPTION**

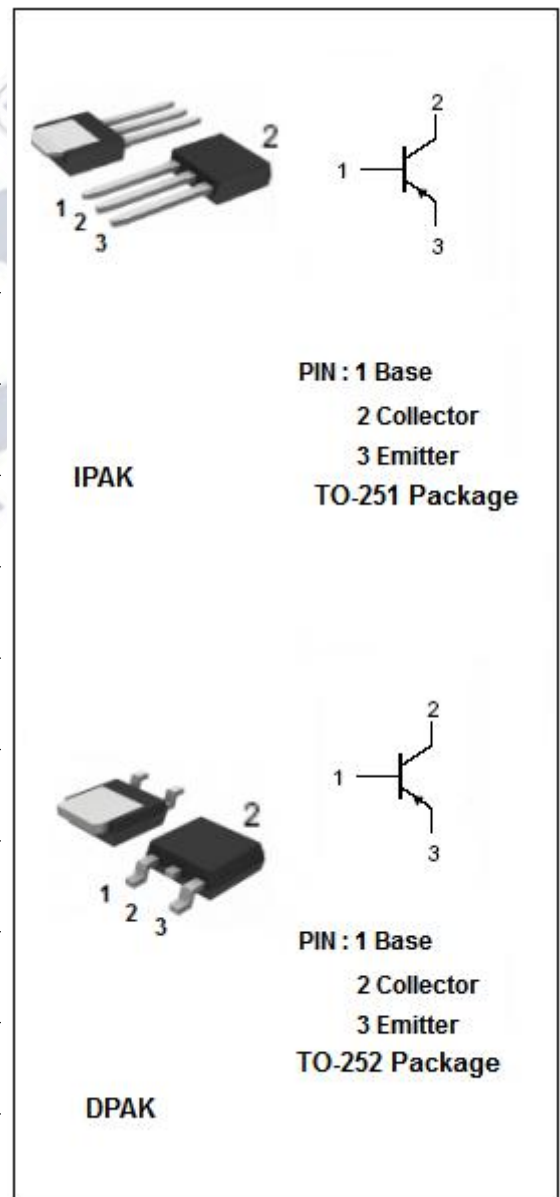
- High current and high  $f_T$
- Small and slim package making it easy to make 2SB1203/2SD1803-used set smaller
- Low collector-to-emitter saturation voltage
- Excellent linearity of  $h_{FE}$
- Fast switching speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- relay drivers, High speed inverters, converters and other general high-current switching applications

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-5	A
$I_{CP}$	Collector Current-Pulse	-8	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.0	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon PNP Power Transistor****2SB1203****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	$I_C = -3A; I_B = -150mA$			-0.55	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3A; I_B = -150mA$			-1.3	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -10\mu A; I_B = 0$	-60			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1mA; I_B = 0$	-50			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu A; I_C = 0$	-6			V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -40V; I_E = 0$			-1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -4V; I_C = 0$			-1	$\mu A$
$h_{FE1}$	DC Current Gain	$I_C = -0.5A; V_{CE} = -2V$	70		400	
$h_{FE2}$	DC Current Gain	$I_C = -4A; V_{CE} = -2V$	35			
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10V; f = 1.0MHz$		60		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C = -1A; V_{CE} = -5V$		130		MHz

◆  **$h_{FE1}$  Classifications**

Q	R	S	T
70-140	100-200	140-280	200-400

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Outline Drawing

