

isc Silicon NPN Power Transistor

2SD1802

DESCRIPTION

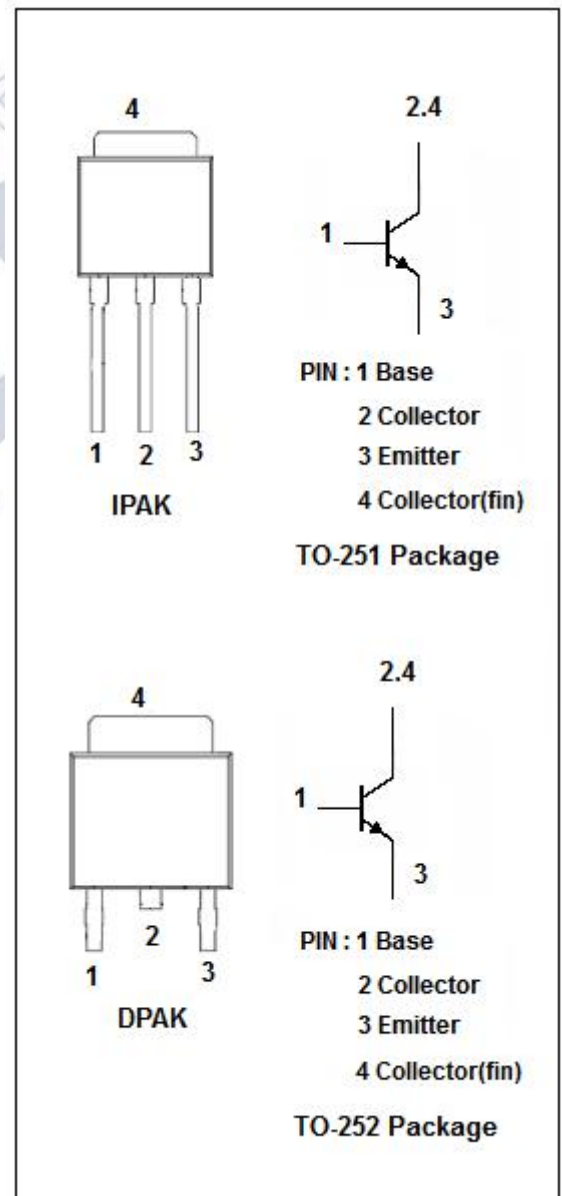
- Large current capacitance and wide ASO
- Small and slim package making it easy to make 2SD1802/ 2SB1202-used set smaller
- Low collector-to-emitter saturation voltage
- Fast switching speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Voltage regulators, relay drivers, lamp drivers, electrical equipment

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EB0}	Emitter-Base Voltage	6	V
I _C	Collector Current-Continuous	3	A
I _{CP}	Collector Current-Pulse	6	A
P _C	Collector Power Dissipation @ T _C =25°C	15	W
	Collector Power Dissipation @ T _a =25°C	1.0	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon NPN Power Transistor**2SD1802****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	$I_C=2\text{A}; I_B=100\text{mA}$			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=100\text{mA}$			1.2	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}; I_B=0$	60			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	50			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}; I_C=0$	6			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=40\text{V}; I_E=0$			1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			1	μA
h_{FE1}	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=2\text{V}$	100		560	
h_{FE2}	DC Current Gain	$I_C=3\text{A}; V_{CE}=2\text{V}$	35			
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$		25		pF
f_T	Current-Gain—Bandwidth Product	$I_C=50\text{mA}; V_{CE}=10\text{V}$		150		MHz

◆ **h_{FE1} Classifications**

R	S	T	U
100-200	140-280	200-400	280-560

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Outline Drawing

