

isc Silicon NPN Power Transistor

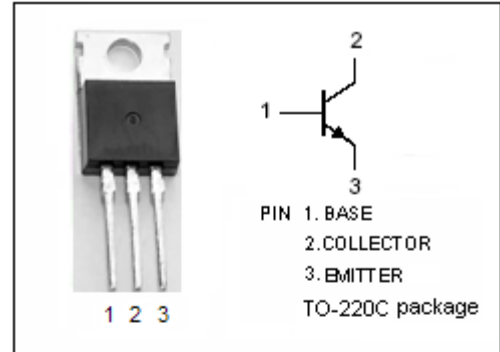
2SD812

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- Good Linearity of h_{FE}
- Wide Area of Safe Operation
- Complement to Type 2SB747

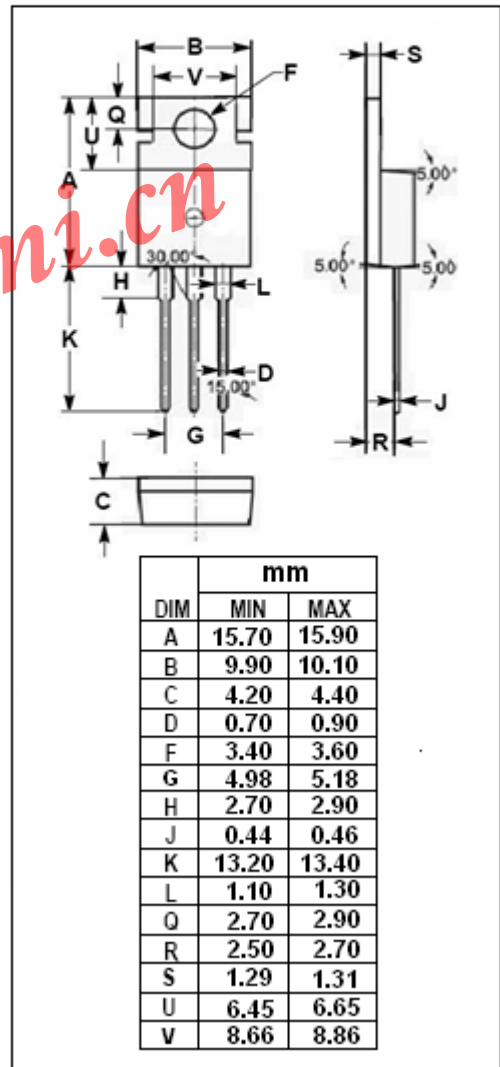
APPLICATIONS

- High power amplifier applications.
- Suitable for 15~20W home stereo output amplifier and voltage regulator.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD812****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	$I_C=3A; I_B=0.3A$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3A; V_{CE}=5V$			1.8	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=80V; I_E=0$			50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=3V; I_C=0$			50	μA
h_{FE-1}	DC Current Gain	$I_C=20mA; V_{CE}=5V$	20			
h_{FE-2}	DC Current Gain	$I_C=1A; V_{CE}=5V$	40		200	
h_{FE-3}	DC Current Gain	$I_C=3A; V_{CE}=5V$	20			
C_{OB}	Collector Output Capacitance	$I_E=0; V_{CB}=10V; f=1MHz$		90		pF
f_T	Current-Gain Bandwidth Product	$I_C=0.5A; V_{CE}=5V$		15		MHz

◆ h_{FE-2} Classifications

R	Q	P
40-80	60-120	100-200