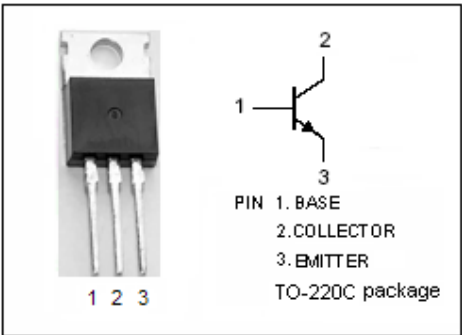


isc Silicon NPN Power Transistor

2SD859

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}= 250V(\text{Min})$
- High Collector Power Dissipation

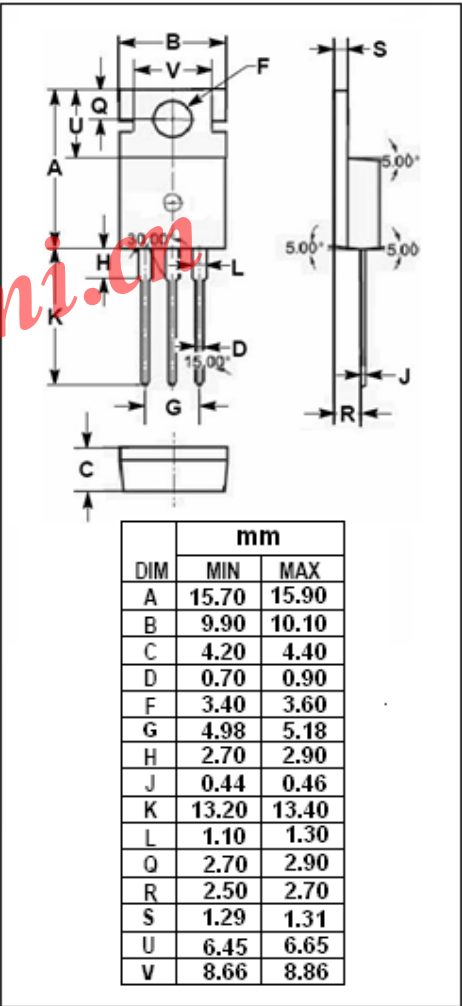


APPLICATIONS

- Designed for AF power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	350	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.75	A
I_{CM}	Collector Current-Peak	1.5	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	35	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 30\text{mA}; I_B = 0$	250			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1\text{A}; I_B = 0.2\text{A}$			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1\text{A}; V_{CE} = 10\text{V}$			1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE} = 150\text{V}; I_B = 0$			1	mA
I_{CES}	Collector Cutoff Current	$V_{CE} = 350\text{V}; V_{BE} = 0$			1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5\text{V}; I_C = 0$			1	mA
h_{FE-1}	DC Current Gain	$I_C = 0.3\text{A}; V_{CE} = 10\text{V}$	40		250	
h_{FE-2}	DC Current Gain	$I_C = 1\text{A}; V_{CE} = 10\text{V}$	10			

Switching Times

t_{on}	Turn-On Time	$I_C = 1\text{A}; I_{B1} = -I_{B2} = 0.1\text{A}$		0.2		μs
t_{off}	Turn-Off Time			2.0		μs

◆ h_{FE-1} Classifications

R	Q	P
40-90	70-150	120-250