

isc Silicon NPN Power Transistor
2SD880
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.0V(\text{Max}) @ I_C = 3.0A$
- Complement to Type 2SB834
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

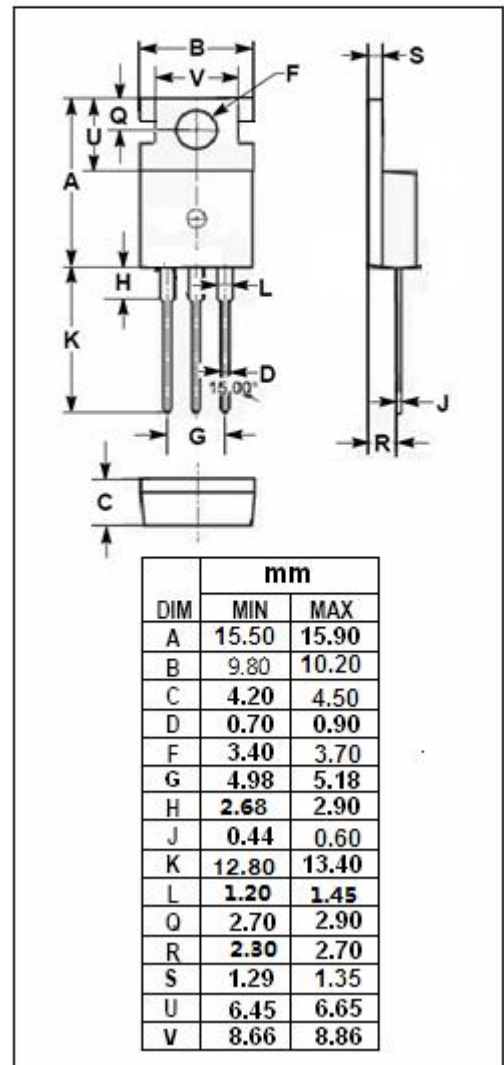
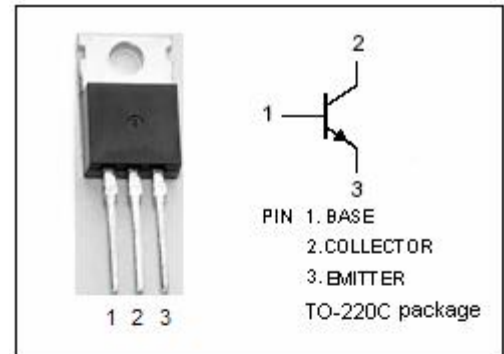
- Designed for use in audio frequency power amplifier applications

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	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3.0	A
I_{CM}	Collector Current-Peak	6.0	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th}j-c}$	Thermal Resistance, Junction to Case	4.16	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	60			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA ; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3.0A; I _B = 0.3A			1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 0.5A ; V _{CE} = 5V			1.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 60V ; I _E = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V ; I _C = 0			100	μ A
h _{FE}	DC Current Gain	I _C = 0.5A ; V _{CE} = 5V	60		300	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 5V; f _{test} = 1.0MHz		3.0		MHz

Switching times

t _{on}	Turn-on Time	I _C = 2A , I _{B1} = I _{B2} = 200mA P _W = 20 μ S; V _{CC} =30V			1.2	μ s
t _{stg}	Storage Time				2.0	μ s
t _f	Fall Time				1.1	μ s

◆ h_{FE} Classifications

O	Y	GR
60-120	100-200	150-300

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