

isc Silicon NPN Power Transistor
2SD1770
DESCRIPTION

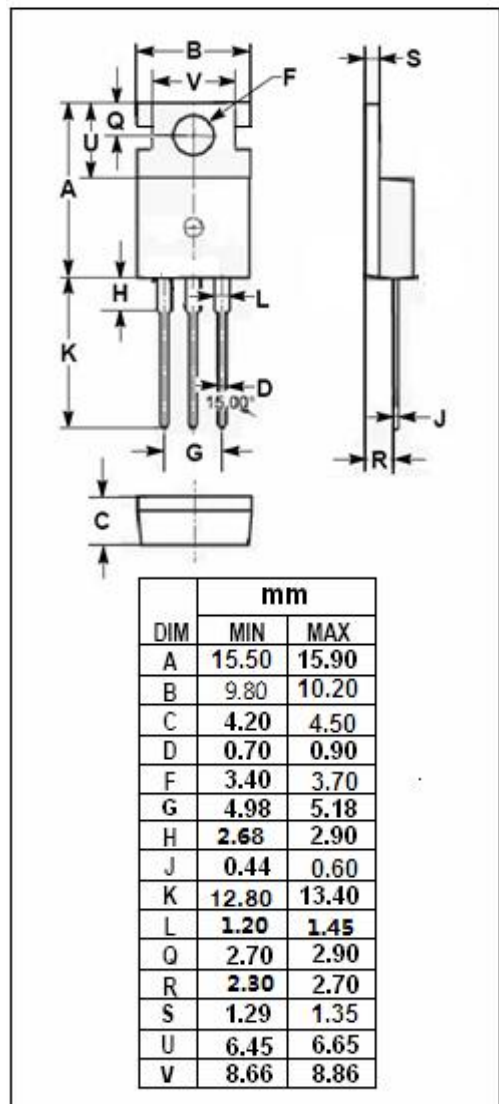
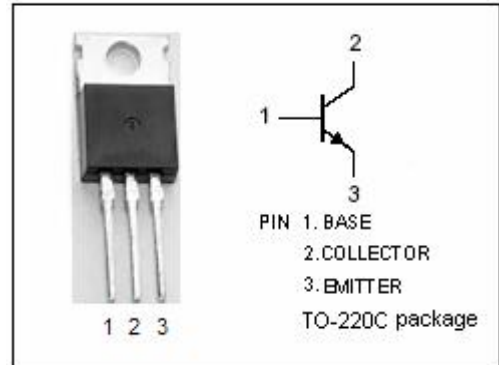
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 150V(\text{Min.})$
- Complement to Type 2SB1190
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power amplifier applications.
- TV vertical deflection output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1	A
I_{CM}	Collector Current-Peak	2	A
P_C	Total Power Dissipation @ $T_C = 25^\circ\text{C}$	25	W
	Total Power Dissipation @ $T_a = 25^\circ\text{C}$	1.4	
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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 5mA; I _B = 0	150			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 0.5A; I _B = 50mA			1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 0.3A; V _{CE} = 10V			1.0	V
I _{CB0}	Collector Cutoff Current	V _{CB} = 200V; I _E = 0			50	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			50	μA
h _{FE-1}	DC Current Gain	I _C = 0.1A; V _{CE} = 10V	60		240	
h _{FE-2}	DC Current Gain	I _C = 0.3A; V _{CE} = 10V	50			
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A; V _{CE} = 10V		20		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} =1MHz		27		pF

◆ h_{FE-1} Classifications

Q	P
60-140	100-240

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