

isc Silicon NPN Power Transistor
2SD1975
DESCRIPTION

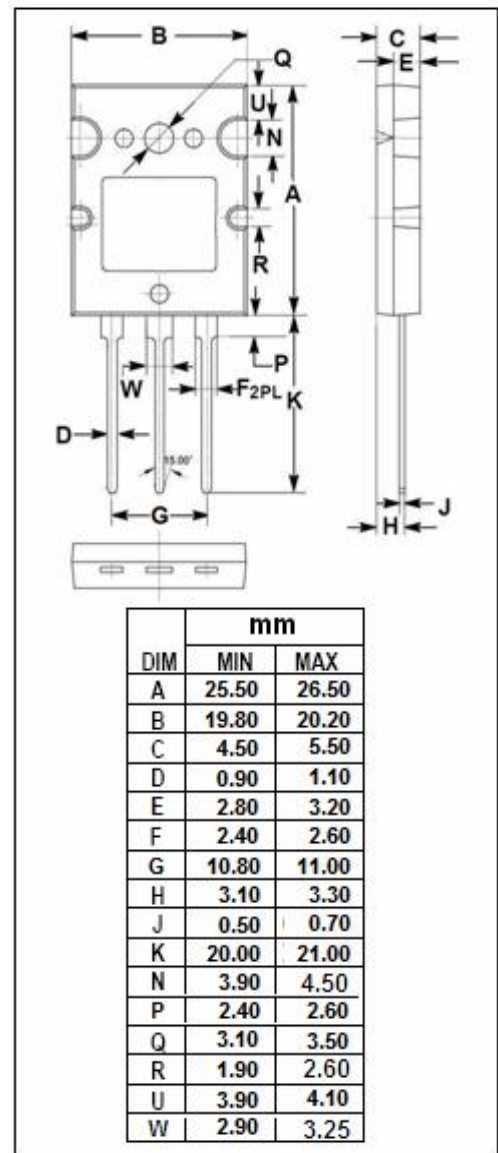
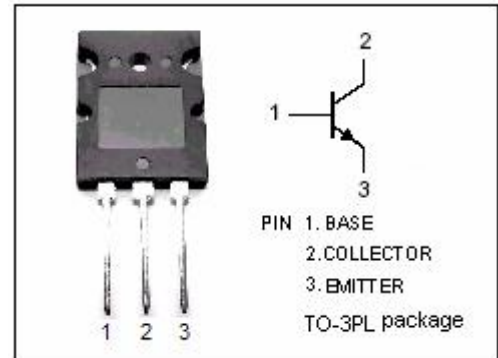
- Good Linearity of h_{FE}
- Wide Area of Safe Operation
- High DC Current-Gain Bandwidth Product
- Complement to Type 2SB1317
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High power amplification
- Optimum for the output stage of a Hi-Fi audio amplifier.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	25	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3.5	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	150	
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 _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 1A			2.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 8A; V _{CE} = 5V			1.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 180V; I _E = 0			50	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 3V; I _C = 0			50	μ A
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	60		200	
h _{FE-3}	DC Current Gain	I _C = 8A; V _{CE} = 5V	20			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		200		pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 5V; f _{test} = 1.0MHz		20		MHz

◆ h_{FE-2} Classifications

Q	S	P
60-120	80-160	100-200

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