

isc Silicon NPN Power Transistor
2SD1506
DESCRIPTION

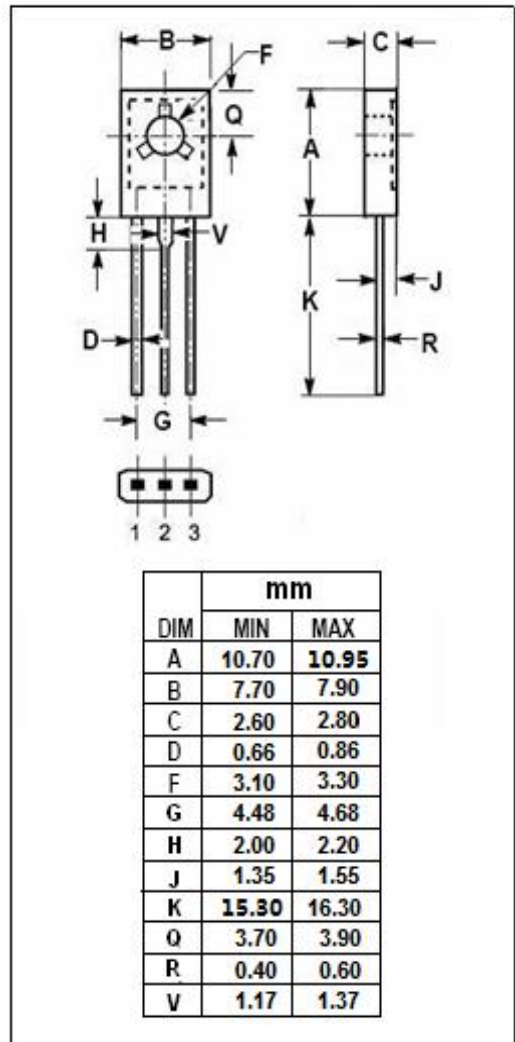
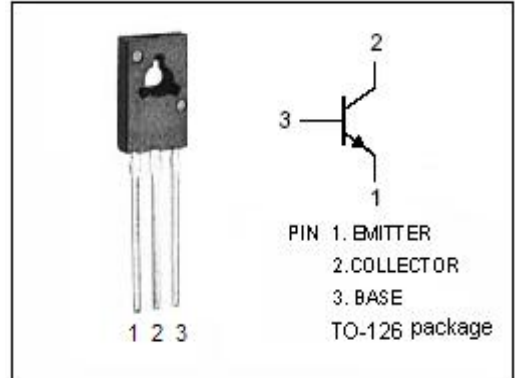
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 2A$
- Wide Area of Safe Operation
- Complement to Type 2SB1065
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low 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	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	4.5	A
P_C	Total Power Dissipation @ $T_a = 25^\circ\text{C}$	1.2	W
	Total Power Dissipation @ $T_c = 25^\circ\text{C}$	10	
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 = 1mA; I _B = 0	50			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 50 μ A; I _E = 0	60			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50 μ A; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.2A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.2A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			1.0	μ A
h _{FE}	DC Current Gain	I _C = 0.5A; V _{CE} = 3V	56		390	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 5V		90		MHz
C _{OB}	Output Capacitance	I _E =0; V _{CB} = 10V; f= 1MHz		40		pF

◆ h_{FE} Classifications

N	P	Q	R
56-120	82-180	120-270	180-390

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