

isc Silicon NPN Power Transistor

2SD1516

DESCRIPTION

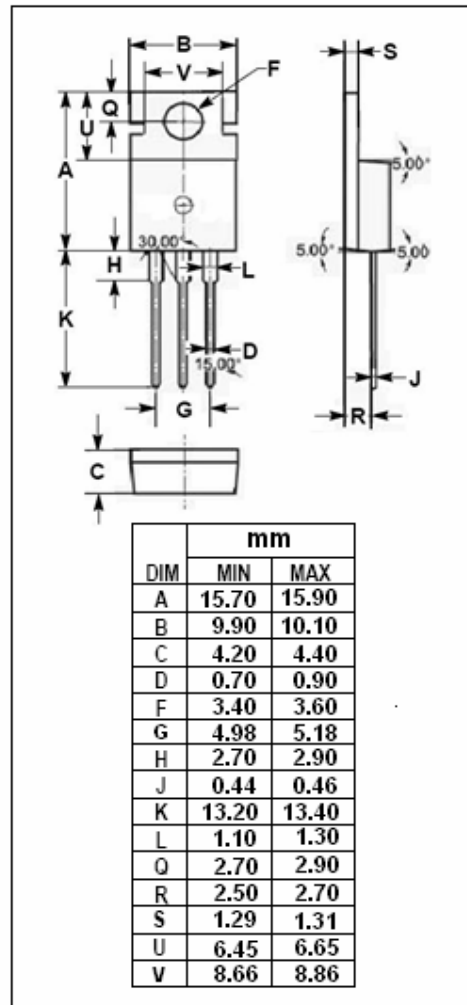
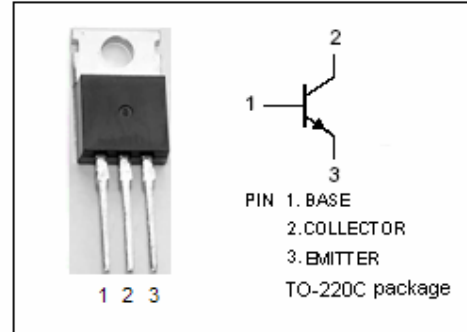
- Low Collector Saturation Voltage
- Good Linearity of h_{FE}
- High Switching Speed
- High I_C

APPLICATIONS

- Designed for power amplifier ,power switching applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	130	V
V_{CEO}	Collector-Emmitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current -Continuous	2	A
I_{CM}	Collector Current-Peak	5	A
P_C	Collector Power Dissipation @ $T_a=25^\circ C$	1.4	W
	Collector Power Dissipation @ $T_C=25^\circ C$	25	
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~150	°C



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ELECTRICAL CHARACTERISTICS

T_j=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	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A ; I _B = 0.1A			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A ; I _B = 0.1A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 100V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			50	μ A
h _{FE-1}	DC Current Gain	I _C = 0.1A ; V _{CE} = 2V	45			
h _{FE-2}	DC Current Gain	I _C = 0.5A ; V _{CE} = 2V	60		260	
f _T	Current Gain-Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		2.5		MHz

Switching Times

t _{on}	Turn-on Time	I _C = 0.5A , I _{B1} = -I _{B2} = 50mA		0.1		μ s
t _{stg}	Storage Time			2.5		μ s
t _f	Fall Time			0.3		μ s

◆ h_{FE-2} Classifications

R	Q	P
60-120	90-180	130-260