

isc Silicon NPN Power Transistor

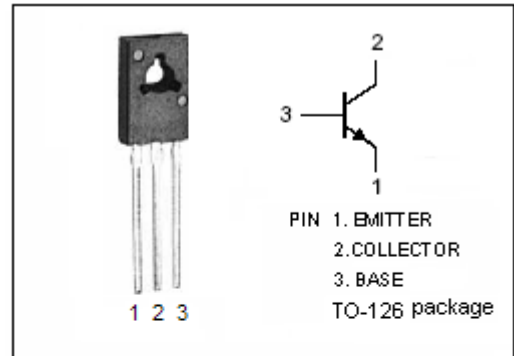
2SD1531

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 40V(\text{Min})$
- Good Linearity of h_{FE}
- Low Collector Saturation Voltage

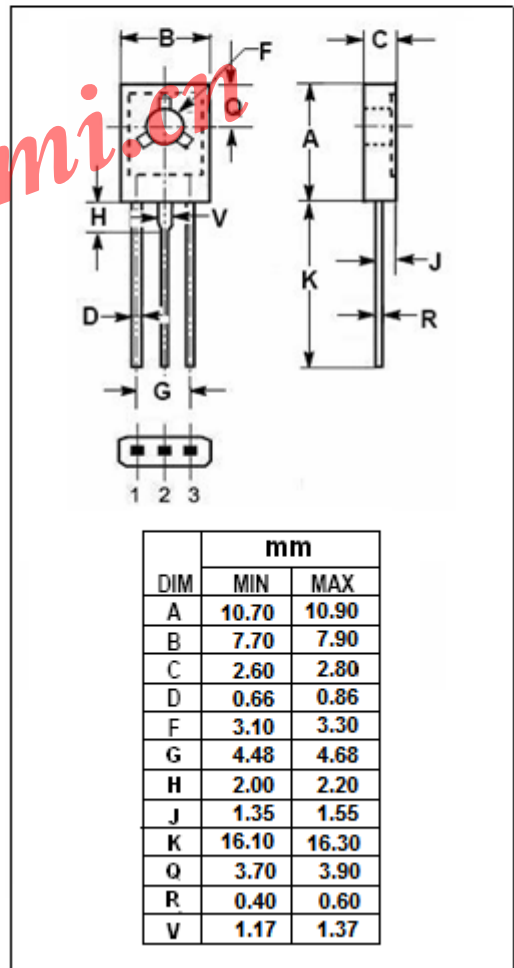
APPLICATIONS

- Designed for AF output amplifier applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CP}	Collector Current-Peak	4	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	5	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.2	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1531****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	50			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=2\text{mA}; I_B=0$	40			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$			1.0	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}=10\text{V}; I_B=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	50		220	
f_T	Current-Gain Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=5\text{V}$		150		MHz
C_{OB}	Collector Output Capacitance	$I_E=0; V_{CB}=20\text{V}; f=1\text{MHz}$		20		pF

◆ **h_{FE} Classifications**

P	Q	R
50-100	80-160	120-220