isc Silicon NPN Power Transistor   MJE200
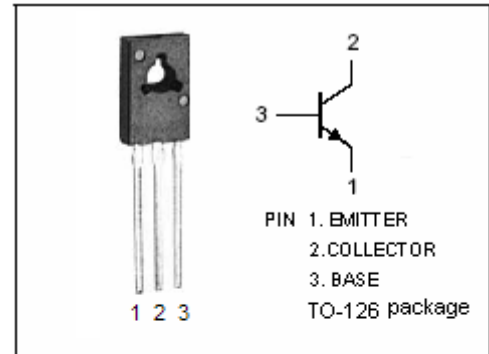
DESCRIPTION
・Low Collector–Emitter Saturation Voltage−
・DC Current Gain-Bandwidth Product
・High DC Current Gain
・Complement to MJE210

APPLICATIONS
・Designed for low voltage, low-power, high-gain audio amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T$_a$=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V$_{CBO}$	Collector-Base Voltage	40	V
V$_{CEO}$	Collector-Emitter Voltage	25	V
V$_{EBO}$	Emitter-Base Voltage	8	V
I$_C$	Collector Current-Continuous	5	A
I$_B$	Base Current	1	A
P$_C$	Collector Power Dissipation T$_C$=25℃	15	W
T$_i$	Junction Temperature	150	℃
T$_{stg}$	Storage Temperature Range	-65~150	℃
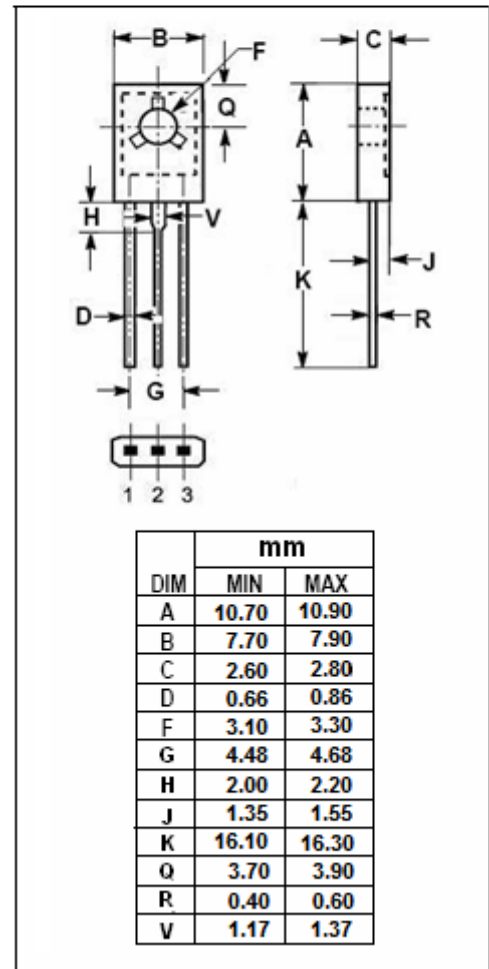
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R$_{th\ j-c}$	Thermal Resistance,Junction to Case	8.34	℃/W
R$_{th\ j-a}$	Thermal Resistance,Junction to Ambient	83.4	℃/W

PIN 1. EMITTER
2. COLLECTOR
3. BASE
TO-126 package

DIM	mm	
	MIN	MAX
A	10.70	10.90
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	16.10	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

isc Silicon NPN Power Transistor   **MJE200**

ELECTRICAL CHARACTERISTICS

T_C =25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA; I_B= 0	25		V
$V_{CE(sat)\text{-}1}$	Collector-Emitter Saturation Voltage	I_C= 0.5 A ;I_B= 50mA		0.3	V
$V_{CE(sat)\text{-}2}$	Collector-Emitter Saturation Voltage	I_C= 2A ;I_B= 0.2A		0.75	V
$V_{CE(sat)\text{-}3}$	Collector-Emitter Saturation Voltage	I_C=5A ;I_B=1A		1.8	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C=5A ;I_B= 1A		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 2A; V_{CE}= 1V		1.6	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 40V; I_E= 0 V_{CB}= 40V; I_E= 0;T_C= 125℃		0.1 0.1	μ A mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0		0.1	μ A
$h_{FE\text{-}1}$	DC Current Gain	I_C= 0.5 A ; V_{CE}= 1V	70		
$h_{FE\text{-}2}$	DC Current Gain	I_C= 2A ; V_{CE}= 1V	45	180	
$h_{FE\text{-}3}$	DC Current Gain	I_C= 5A ; V_{CE}=2V	10		
f_T	Current-Gain—Bandwidth Product	I_C= 0.1 A; V_{CE}= 10V; f_{test} = 10MHz	65		MHz
C_{OB}	Collector Capacitance	I_E= 0; V_{CB}= 10V; f_{test} = 0.1MHz		80	pF