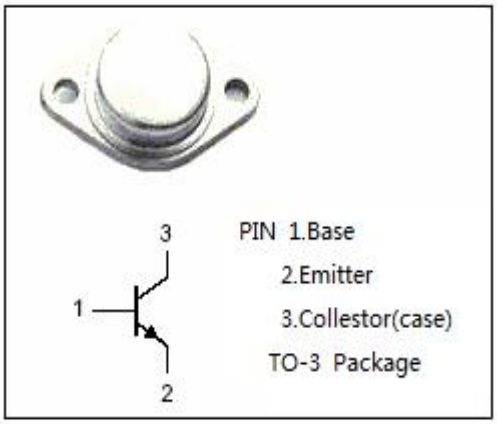
isc Silicon NPN Power Transistor — BDY25

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 140V(Min.)
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 0.6V(Max)@ I_C = 2A
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

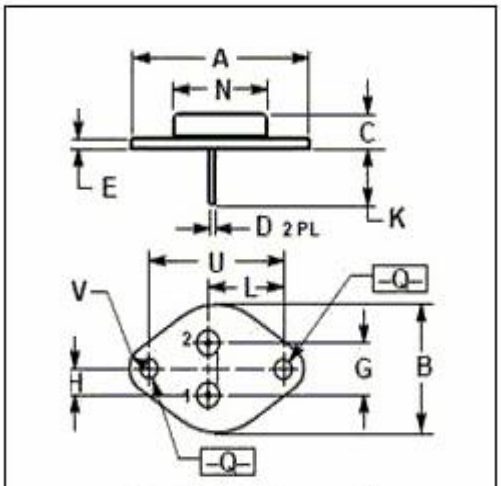


APPLICATIONS

- Designed for LF signal powe amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current	3	A
P_C	Collector Power Dissipation@T_C=25℃	87.5	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.0	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA; I_B= 0	140			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	200			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.25A			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.25A			1.2	V
I_{CES}	Collector Cutoff Current	V_{CE}= 180V; V_{BE}= 0			1.0	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 140V; I_B= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 10V; I_C= 0			1.0	mA
h_{FE}	DC Current Gain	I_C= 2A; V_{CE}= 4V	15		100	
f_T	Current Gain-Bandwidth Product	I_C= 0.5A; V_{CE}= 15V; f=10MHz	10			MHz
Switching Times						
t_{on}	Turn-On Time	I_C= 5A; I_B= 1A			0.5	μs
t_{off}	Turn-Off Time	I_C= 5A; I_{B1}= 1A; I_{B2}= -0.5A			2.0	μs

◆ **h_{FE} Classifications**

A	B	C
15-45	30-90	75-100