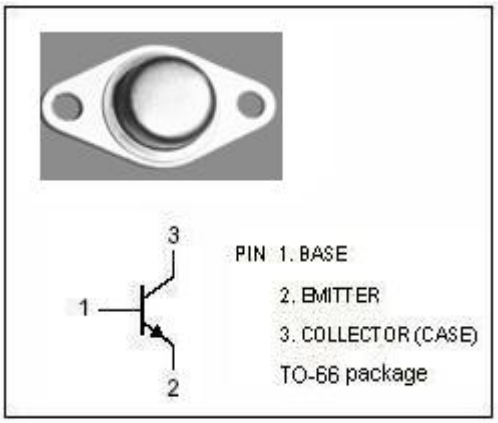
isc Silicon NPN Power Transistor — BDY78

DESCRIPTION

- Continuous Collector Current-I_C= 4A
- Collector Power Dissipation-
  : P_C= 25W @T_C= 25℃
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

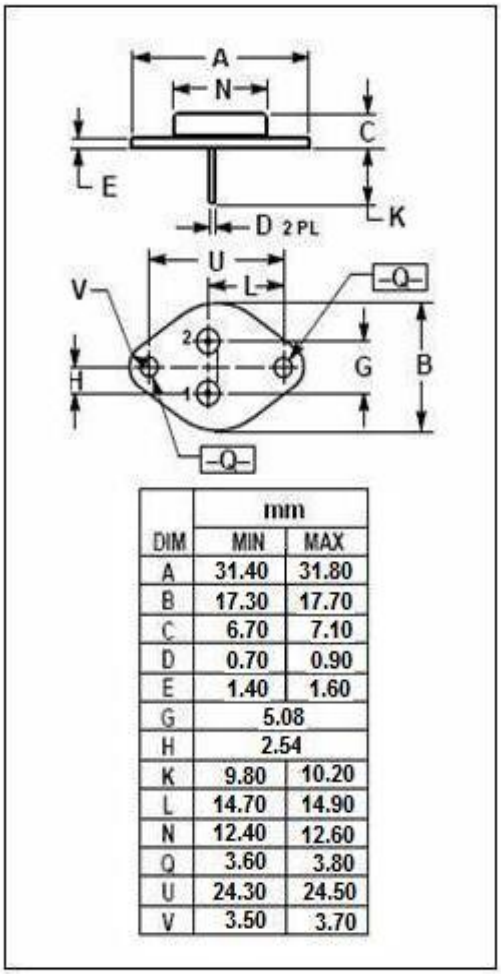


APPLICATIONS

- Designed for general purpose switching and amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	90	V
V_{CEX}	Collector-Emitter Voltage V_{BE}= -1.5V	90	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation@T_C=25℃	25	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃



DIM	mm MIN	MAX
A	31.40	31.80
B	17.30	17.70
C	6.70	7.10
D	0.70	0.90
E	1.40	1.60
G	5.08	
H	2.54	
K	9.80	10.20
L	14.70	14.90
N	12.40	12.60
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	7.0	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA; I_B= 0	55		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	90		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 0.5A; I_B= 50mA		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 1A		3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 0.5A; V_{CE}= 4V		2.0	V
I_{CEX}	Collector Cutoff Current	V_{CE}= 90V; V_{BE}= -1.5V V_{CE}= 90V; V_{BE}= -1.5V, T_C=150℃		1.0 5.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0		1.0	mA
h_{FE-1}	DC Current Gain	I_C= 0.5A; V_{CE}= 4V	25	100	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 4V	5		
f_T	Current Gain-Bandwidth Product	I_C= 0.2A; V_{CE}= 10V	8		MHz