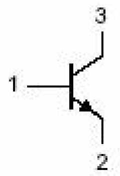
isc Silicon NPN Power Transistors BDY93

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 350V(Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use as high-speed power switch at high voltage.



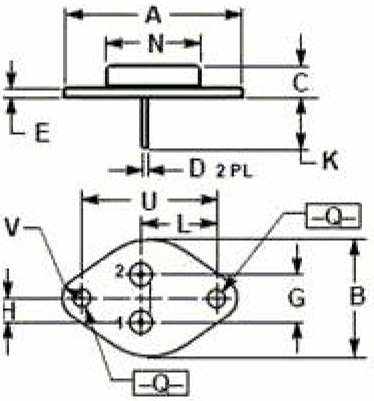
PIN 1.Base
2.Emitter
3.Collestor(case)
TO-3 Package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	750	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	2	A
I_{BM}	Base Current-Peak	3	A
P_C	Collector Power Dissipation @T_C=75℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.65	℃/W



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

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-EmitterBreakdownVoltage	I_C= 50mA ; I_B= 0	350			V
$V_{CE(sat)\text{-}1}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.5	V
$V_{CE(sat)\text{-}2}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 1.25A			3.0	V
$V_{BE(sat)\text{-}1}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.4	V
$V_{BE(sat)\text{-}2}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 1.25A			1.6	V
I_{CBO}	Collector Cutoff Current	V_{CB}=750V; I_E= 0, V_{CB}=750V; I_E= 0,T_C=125℃			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C=0			0.1	mA
h_{FE}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	15		60	
C_{OB}	Output Capacitance	I_E= 0;V_{CB}= 10V;f_{test}= 1MHz			500	pF
f_T	Current-Gain--Bandwidth Product	I_C= 0.2A ; V_{CE}= 10V ;f_{test}= 1MHz	4			MHz
Switching Times						
t_{on}	Turn-On Time	I_C= 2.5A; I_{B1}= 0.5A;I_{B2}= -1A; V_{CC}= 250V		0.3	0.5	μs
t_{stg}	Storage Time			2.0	3.5	μs
t_f	Fall Time			0.3		μs

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