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Silicon NPN Power Transistor

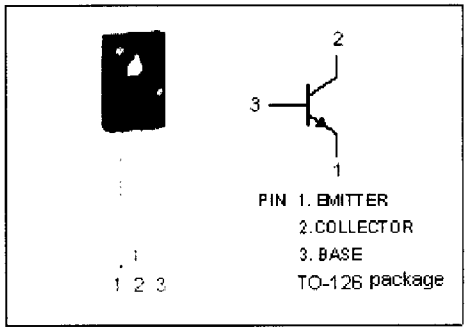
BD439

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 60V(Min)
- Complement to type BD440

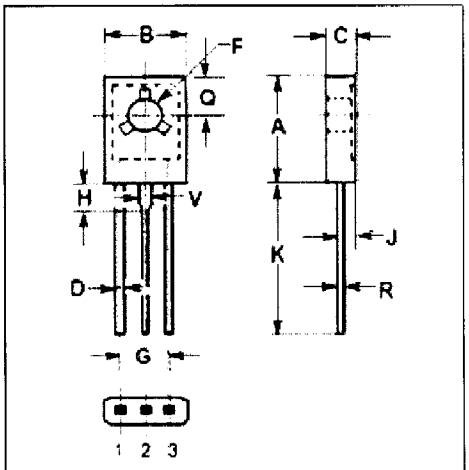
APPLICATIONS

- Designed for medium power linear and switching applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CES}	Collector-Emitter Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Pulse	7	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_C=25℃	36	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



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

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA; I_B= 0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			0.8	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	I_C= 10mA; V_{CE}= 5V		0.58		V
$V_{BE(on)-2}$	Base-Emitter On Voltage	I_C= 2A; V_{CE}= 1V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V; I_E= 0			100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 60V; V_{BE}= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1	mA
h_{FE-1}	DC Current Gain	I_C= 10mA; V_{CE}= 5V	20			
h_{FE-2}	DC Current Gain	I_C= 0.5A; V_{CE}= 1V	40			
h_{FE-3}	DC Current Gain	I_C= 2A; V_{CE}= 1V	25			
f_T	Current-Gain—Bandwidth Product	I_C= 0.25A; V_{CE}= 1V	3			MHz