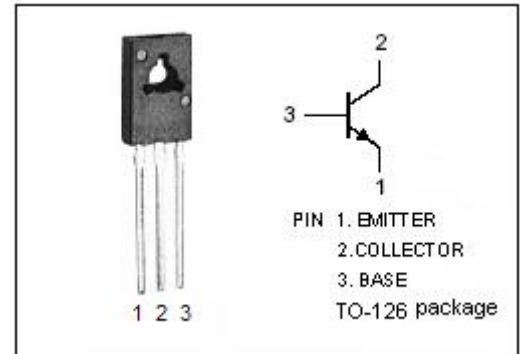


isc Silicon NPN Power Transistor
BD439
DESCRIPTION

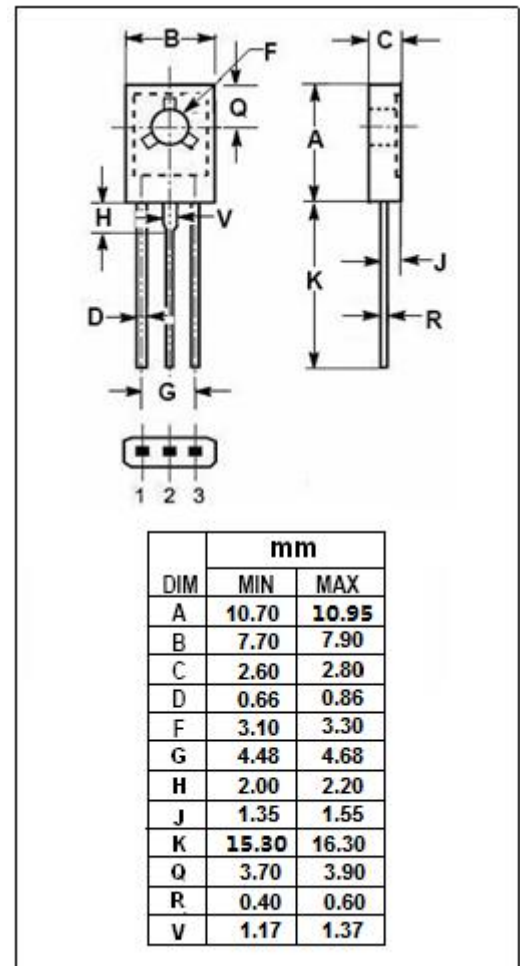
- Collector-Emitter Sustaining Voltage -
: $V_{CEO(SUS)} = 60V(\text{Min})$
- Complement to type BD440
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for medium power linear and switching applications.


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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 @ $T_C=25^\circ\text{C}$	36	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor
BD439
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; 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	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 60V; V _{BE} = 0			100	μ A
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

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