

BF259

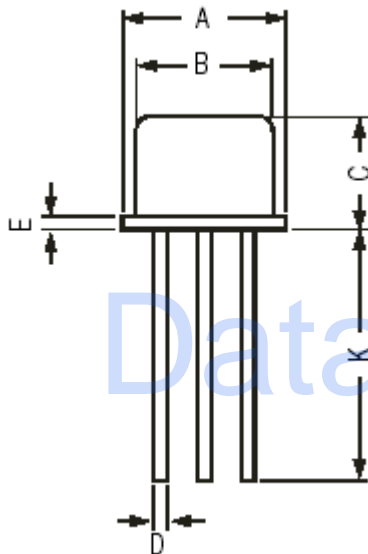
High Voltage Power Transistors



Application:

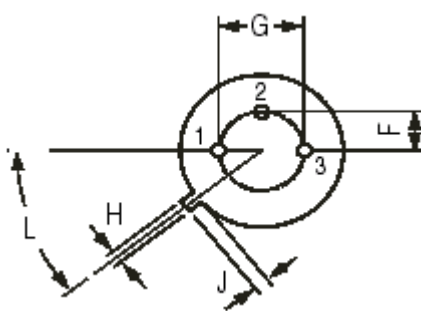
- Devices with breakdown voltages of 160V minimum.
- NPN Silicon High Voltage Power Transistors.

TO-39 Metal Can Package



Dimensions	Minimum	Maximum
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	-
L	42°	48°

Dimensions : Millimetres



Pin Configuration

1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings

Parameter	Symbol	BF259	Units
Collector Base Voltage	V_{CBO}	300	V
Collector Emitter Voltage	V_{CEO}		
Emitter Base Voltage	V_{EBO}	5	
Collector Current-Continuous	I_C	100	mA
Collector Current-Peak	I_{CM}	300	
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate above 25°C	P_D	1	W mW/ $^\circ\text{C}$
Power Dissipation at $T_C = 25^\circ\text{C}$ Derate above 25°C		5.71	
		5 28.57	
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200	$^\circ\text{C}$
Thermal Characteristics			
Junction to Ambient in Free Air	$R_{th(j-a)}$	175	$^\circ\text{C}/\text{W}$
Junction to Case	$R_{th(j-c)}$	35	

Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless specified otherwise)

Parameter	Symbol	Test Condition	BF259	Units
Collector Emitter Voltage	V_{CEO}	$I_C = 10\text{mA}, I_B = 0$	>300	V
Collector Base Voltage	V_{CBO}	$I_C = 100\mu\text{A}, I_E = 0$	>300	
Emitter Base Voltage	V_{EBO}	$I_E = 100\mu\text{A}, I_C = 0$	>5	
Collector Cut off Current	I_{CBO}	$V_{CBO} = 250\text{V}, I_E = 0$	<50	nA
DC Current Gain	h_{FE}	$I_C = 30\text{mA}, V_{CE} = 10\text{V}$	25	-
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C = 30\text{mA}, I_B = 6\text{mA}$	1	V

Dynamic Characteristics

Parameter	Symbol	Test Condition	Typical	Units
Transition Frequency	f_t	$I_C = 15\text{mA}, V_{CE} = 10\text{V}, f = 100\text{MHz}$	75	MHz
Collector Base Capacitance	C_{ob}	$V_{CB} = 30\text{V}, I_E = 0, f = 1\text{MHz}$	2.5	pF

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High Voltage Power Transistors



Specifications

V_{CEO} maximum (V)	$I_{C(av)}$ maximum (A)	h_{FE} minimum at $I_C = 30mA$	$V_{CE(Sat)}$ maximum (V) at $I_C = 30mA$	f_T minimum (MHz)	P_{tot} at 25°C (mW)	Package and Pin Out	Type	Part Number
300	0.1	25	1	75	500	TO-39	NPN	BF259

Notes:

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