

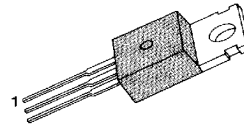
MEDIUM POWER LINEAR AND SWITCHING APPLICATIONS

- Complement to BD240/A/B/C respectively

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage : BD239	V_{CEO}	45	V
: BD239A		60	V
: BD239B		80	V
: BD239C		100	V
Collector Emitter Voltage : BD239	V_{CER}	55	V
: BD239A		70	V
: BD239B		90	V
: BD239C		115	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	2	A
Collector Current (Pulse)	I_C	4	A
Base Current	I_B	0.6	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	30	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^\circ\text{C}$

TO-220



1.Base 2.Collector 3.Emitter

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
*Collector Emitter Sustaining Voltage : BD239	$V_{CEO(sus)}$	$I_C = 30\text{mA}, I_B = 0$	45			V
: BD239A			60			V
: BD239B			80			V
: BD239C			100			V
Collector Cutoff Current : BD239/A	I_{CEO}	$V_{CE} = 30\text{V}, I_B = 0$			0.3	mA
: BD239B/C		$V_{CE} = 60\text{V}, I_B = 0$			0.3	mA
Collector Cutoff Current : BD239	I_{CES}	$V_{CE} = 45\text{V}, V_{BE} = 0$			0.2	mA
: BD239A		$V_{CE} = 60\text{V}, V_{BE} = 0$			0.2	mA
: BD239B		$V_{CE} = 80\text{V}, V_{BE} = 0$			0.2	mA
: BD239C		$V_{CE} = 100\text{V}, V_{BE} = 0$			0.2	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$			1	mA
*DC Current Gain	h_{FE}	$V_{CE} = 4\text{V}, I_C = 0.2\text{A}$	40			
		$V_{CE} = 4\text{V}, I_C = 1\text{A}$	15			
*Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 0.2\text{A}$			0.7	V
*Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 4\text{V}, I_C = 1\text{A}$			1.3	V

* Pulse Test: $PW = 350\mu\text{s}$, duty Cycle $\leq 2.0\%$ Pulsed