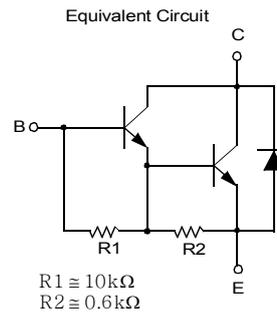
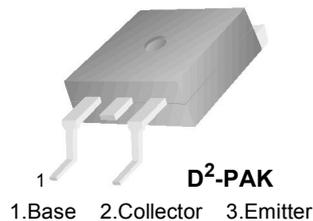


FJB102

High Voltage Power Darlington Transistor

- High DC Current Gain : $h_{FE}=1000$ @ $V_{CE}=4V$, $I_C=3A$ (Min.)
- Low Collector-Emitter Saturation Voltage



Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	8	A
I_{CP}	* Collector Current (Pulse)	15	A
I_B	Base Current (DC)	1	A
P_C	Collector Dissipation ($T_C = 25^\circ\text{C}$)	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-65 ~ 150	$^\circ\text{C}$

* Pulse Test: PW = 300 μs , Duty Cycle = 2% Pulsed

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
$BV_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	$I_C = 30\text{mA}$, $I_B = 0$	100		V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = 500\mu\text{A}$, $I_C = 0$	10		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = 100\text{V}$, $I_E = 0$		50	μA
I_{CEO}	Collector Cut-off Current	$V_{CE} = 50\text{V}$, $I_E = 0$		50	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}$, $I_C = 0$		2	mA
h_{FE}	DC Current Gain	$V_{CE} = 4\text{V}$, $I_C = 3\text{A}$ $V_{CE} = 4\text{V}$, $I_C = 8\text{A}$	1000 200	20000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 3\text{A}$, $I_B = 6\text{mA}$		2.0	V
		$I_C = 8\text{A}$, $I_B = 80\text{mA}$		2.5	V
$V_{BE(ON)}$	Base-Emitter Saturation Voltage	$V_{CE} = 4\text{V}$, $I_C = 8\text{A}$		2.8	V
C_{ob}	Output Capacitance	$V_E = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		200	pF

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
FJB102	FJB102	D ² -PAK	--	--	--

Typical Performance Characteristics

Figure 1. Static Characteristic

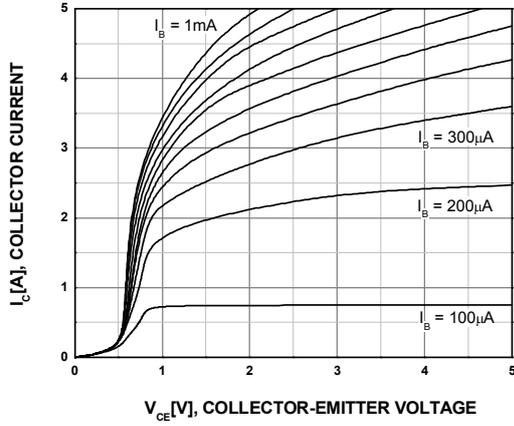


Figure 2. DC Current Gain

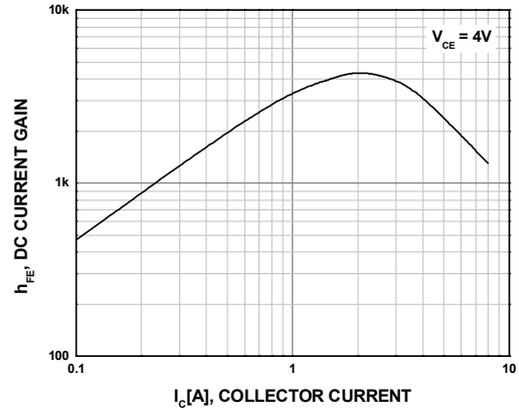


Figure 3. Saturation Voltage

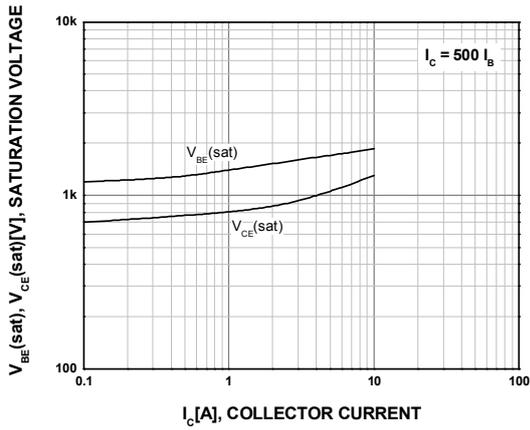


Figure 4. Collector Output Capacitance

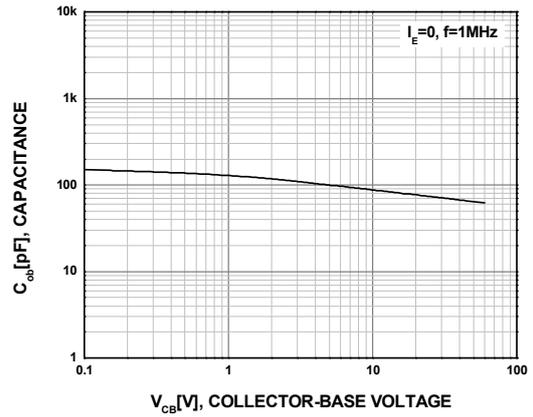


Figure 5. Forward Biased Safe Operating Area

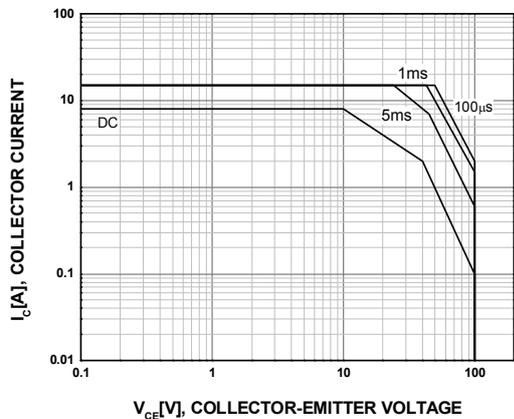
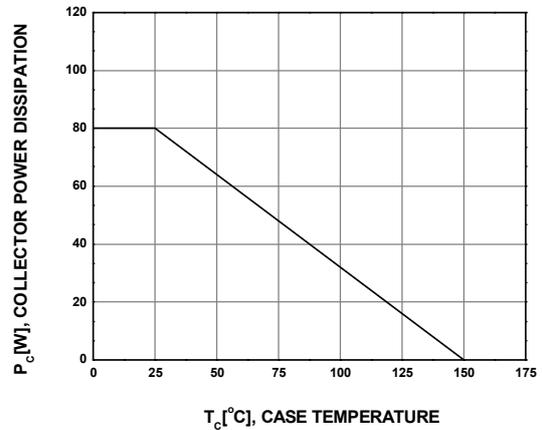
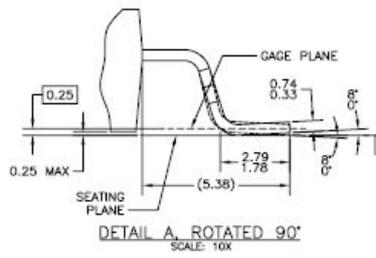
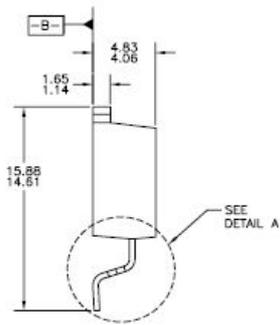
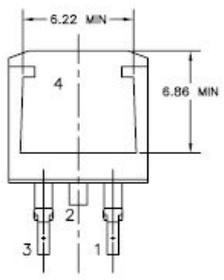
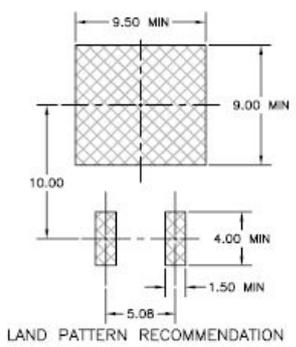
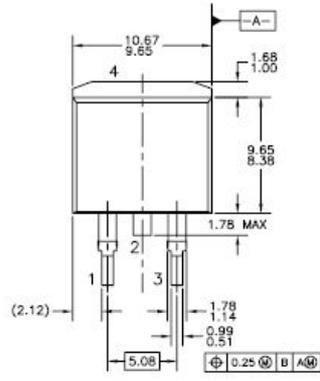


Figure 6. Power Derating



Mechanical Dimensions

D2-PAK



- NOTES: UNLESS OTHERWISE SPECIFIED
- A) ALL DIMENSIONS ARE IN MILLIMETERS.
 - B) REFERENCE JEDEC, TO-263, ISSUE D, VARIATION AB, DATED JULY 2003.
 - C) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M - 1982.
 - D) LOCATION OF THE PIN HOLE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE).
 - E) PRESENCE OF TRIMMED CENTER LEAD IS OPTIONAL.
 - F) FILENAME: TO263A02REV5

Dimensions in Millimeters



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