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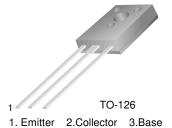
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BD675A/677A/679A/681

Medium Power Linear and Switching Applications

- Medium Power Darlington TR
- Complement to BD676A, BD678A, BD680A and BD682 respectively



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Pa	Value	Units	
V _{CBO}	Collector-Base Voltage	: BD675A	45	V
		: BD677A	60	V
		: BD679A	80	V
		: BD681	100	V
V _{CEO}	Collector-Emitter Voltage	: BD675A	45	V
		: BD677A	60	V
		: BD679A	80	V
		: BD681	100	V
V _{EBO}	Emitter-Base Voltage		5	V
I _C	Collector Current (DC)		4	Α
I _{CP}	*Collector Current (Pulse)	6	Α	
I _B	Base Current	100	mA	
P _C	Collector Dissipation (T _C =25°C)		40	W
T _J	Junction Temperature		150	°C
T _{STG}	Storage Temperature		- 65 ~ 150	°C

Electrical Characteristics $T_C=25$ °C unless otherwise noted

Symbol	Param	eter	Test Condition	Min.	Тур.	Max.	Units
V _{CEO} (sus)	*Collector-Emitter Sustain	ing Voltage : BD675A : BD677A : BD679A : BD681	I _C = 50mA, I _B = 0	45 60 80 100			V V V
I _{CBO}	Collector-Base Voltage	: BD675A : BD677A : BD679A : BD681	$\begin{aligned} &V_{CB} = 45 \text{V}, I_E = 0 \\ &V_{CB} = 60 \text{V}, I_E = 0 \\ &V_{CB} = 80 \text{V}, I_E = 0 \\ &V_{CB} = 100 \text{V}, V_{BE} = 0 \end{aligned}$			200 200 200 200	μΑ μΑ μΑ μΑ
I _{CEO}	Collector Cut-off Current	: BD675A : BD677A : BD679A : BD681	$V_{CE} = 45V, V_{BE} = 0$ $V_{CE} = 60V, V_{BE} = 0$ $V_{CE} = 80V, V_{BE} = 0$ $V_{CE} = 100V, V_{BE} = 0$			500 500 500 500	μΑ μΑ μΑ μΑ
I _{EBO}	Emitter Cut-off Current		$V_{EB} = 5V, I_{C} = 0$			2	mA
h _{FE}	* DC Current Gain	: BD675A/677A/679A : BD681	$V_{CE} = 3V, I_{C} = 2A$ $V_{CE} = 3V, I_{C} = 1.5A$	750 750			
V _{CE} (sat)	* Collector-Emitter Satura	tion Voltage : BD675A/677A/679A : BD681	I _C = 2A, I _B = 40mA I _C = 1.5A, I _B = 30mA			2.8 2.5	V V
V _{BE} (on)	* Base-Emitter ON Voltage	e : BD675A/677A/679A : BD681	$V_{CE} = 3V, I_{C} = 2A$ $V_{CE} = 3V, I_{C} = 1.5A$			2.5 2.5	V V
* Pulse Test: PW=	300μs, duty Cycle=1.5% Pulsed						

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Typical Characteristics

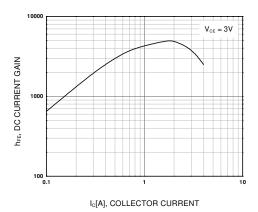


Figure 1. DC current Gain

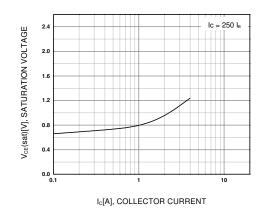


Figure 2. Collector-Emitter Saturation Voltage

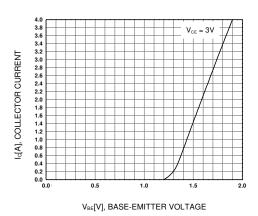


Figure 3. Base-Emitter On Voltage

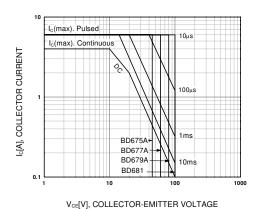


Figure 4. Safe Operating Area

Rev. A, February 2000

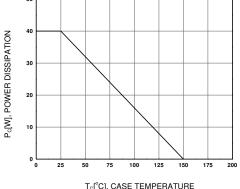


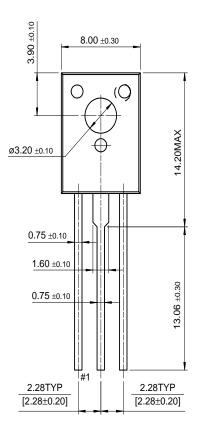
Figure 5. Power Derating

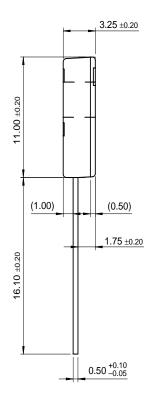
 $\mathsf{T}_{c}[{}^{\circ}\mathsf{C}],\,\mathsf{CASE}\,\mathsf{TEMPERATURE}$

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Package Demensions

TO-126







Dimensions in Millimeters

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