

SEMICONDUCTOR IM

BD375/377/379

Medium Power Linear and Switching Applications

• Complement to BD376, BD378 and BD380 respectively

NPN Epitaxial Silicon Transistor



BD375/377/379

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage : BD375	50	V
	: BD377	75	V
	: BD379	100	V
V _{CEO}	Collector-Emitter Voltage : BD375	45	V
	: BD377	60	V
	: BD379	80	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current (DC)	2	А
I _{CP}	*Collector Current (Pulse)	3	А
I _B	Base Current	1	А
I _B P _C	Collector Dissipation (T _C =25°C)	25	W
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

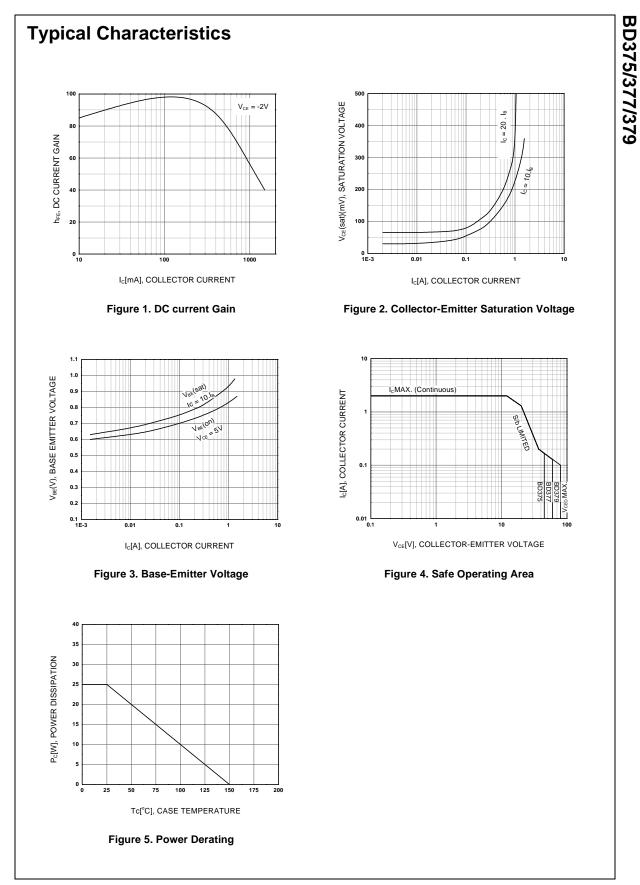
Symbol	Paramet	er	Test Condition	Min.	Тур.	Max.	Units
V _{CEO} (sus)	* Collector-Emitter Sustaini	ng Voltage : BD375 : BD377 : BD379	I _C = 100mA, I _B = 0	45 60 80			V V V
BV _{CBO}	Collector-Base Breakdown Voltage	: BD375 : BD377 : BD379	$I_{\rm C} = 100 \mu {\rm A}, \ I_{\rm E} = 0$	50 75 100			V V V
I _{CBO}	Collector Cut-off Current	: BD375 : BD377 : BD379	$V_{CB} = 45V, I_E = 0$ $V_{CB} = 60V, I_E = 0$ $V_{CB} = 80V, I_E = 0$			2 2 2	μΑ μΑ μΑ
I _{EBO}	Emitter Cut-off Current		$V_{EB} = 5V, I_{C} = 0$			100	μΑ
h _{FE1} h _{FE2}	* DC Current Gain		$V_{CE} = 2V, I_{C} = 0.15A$ $V_{CE} = 2V, I_{C} = 1A$	40 20		375	
V _{CE} (sat)	* Collector-Emitter Saturati	on Voltage	$I_{\rm C} = 1$ A, $I_{\rm B} = 0.1$ A			1	V
V _{BE} (on)	* Base-Emitter ON Voltage		$V_{CE} = 2V, I_{C} = 1A$			1.5	V
t _{ON}	Turn ON Time		$V_{CC} = 30V, I_{C} = 0.5A$		50		ns
t _{OFF}	Turn OFF Time		$I_{B1} = -I_{B2} = 0.05A$ $R_{L} = 60\Omega$		500		ns

* Pulse Test: PW=350µs, duty Cycle=2% Pulsed

h_{FE} Classification

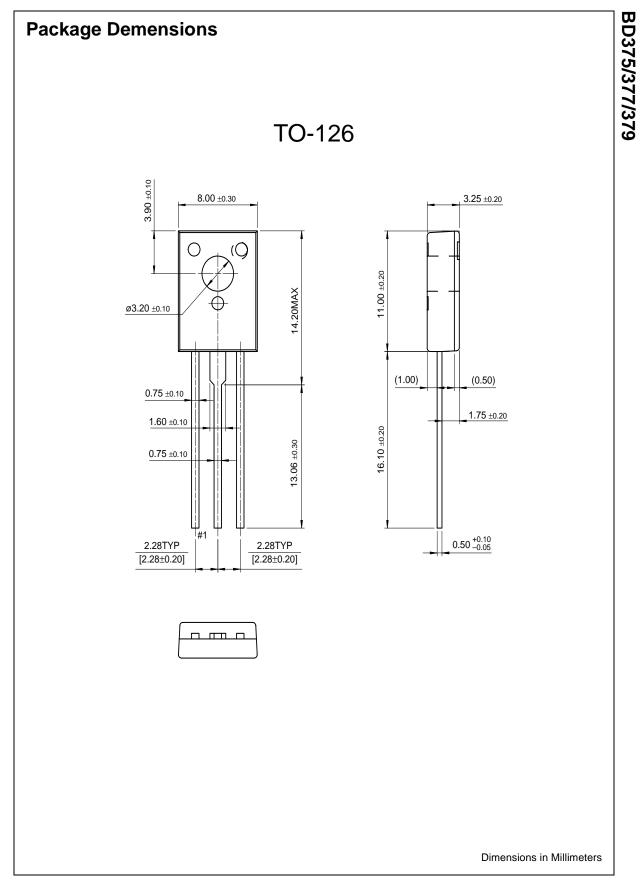
Classification	6	10	16	25
h _{FE1}	40 ~ 100	63 ~ 160	100 ~ 250	150 ~ 375

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Rev. A, February 2000



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