

**isc Silicon NPN Power Transistor**

**BD329**

**DESCRIPTION**

- DC Current Gain-  
:  $h_{FE} = 85\sim 375(\text{Min}) @ I_C = 0.5A$
- Collector-Emitter Sustaining Voltage -  
:  $V_{CEO(SUS)} = 20V(\text{Min})$
- Complement to type BD330

**APPLICATIONS**

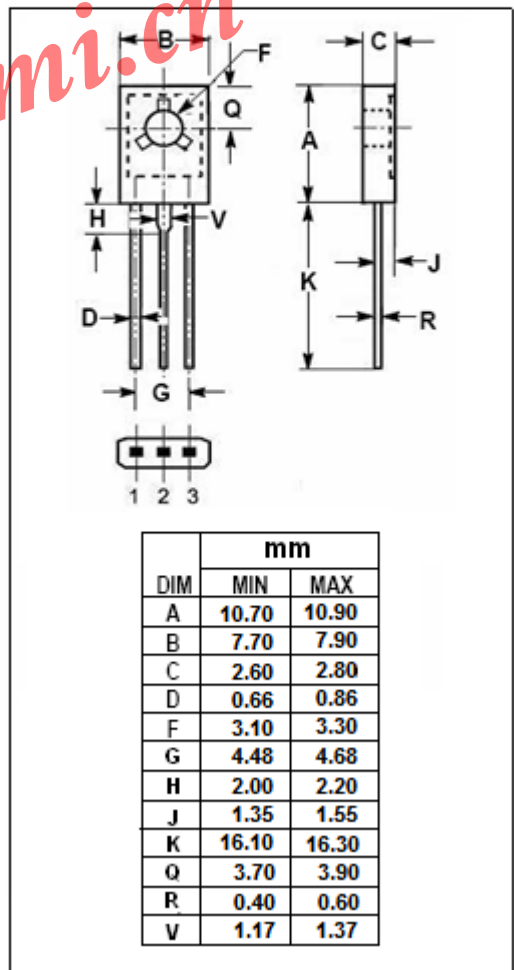
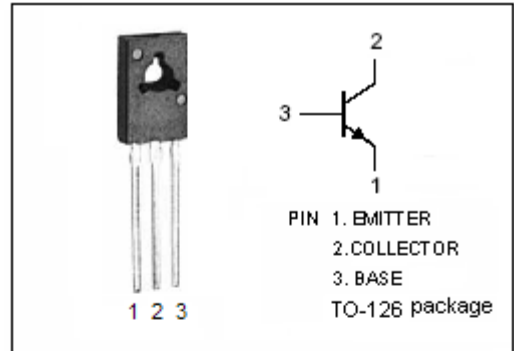
- Especially for battery equipped applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	32	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	3	A
$I_{BM}$	Base Current-Peak	1	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ C$	15	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	7	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	100	$^\circ C/W$



**isc Silicon NPN Power Transistor****BD329****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	20			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.2\text{A}$			0.5	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	$I_C=5\text{mA}; V_{CE}=10\text{V}$		0.6		V
$V_{BE(on)-2}$	Base-Emitter On Voltage	$I_C=2\text{A}; V_{CE}=1\text{V}$			1.2	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=32\text{V}; I_E=0$ $V_{CB}=32\text{V}; I_E=0, T_C=150^{\circ}\text{C}$			0.1 10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.1	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=5\text{mA}; V_{CE}=10\text{V}$	50			
$h_{FE-2}$	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=1\text{V}$	85		375	
$h_{FE-3}$	DC Current Gain	$I_C=2\text{A}; V_{CE}=1\text{V}$	40			
$f_T$	Current-Gain—Bandwidth Product	$I_C=50\text{mA}; V_{CE}=5\text{V}; f_{test}=100\text{MHz}$		130		MHz