

isc Silicon NPN Power Transistors

BD375/377/379

DESCRIPTION

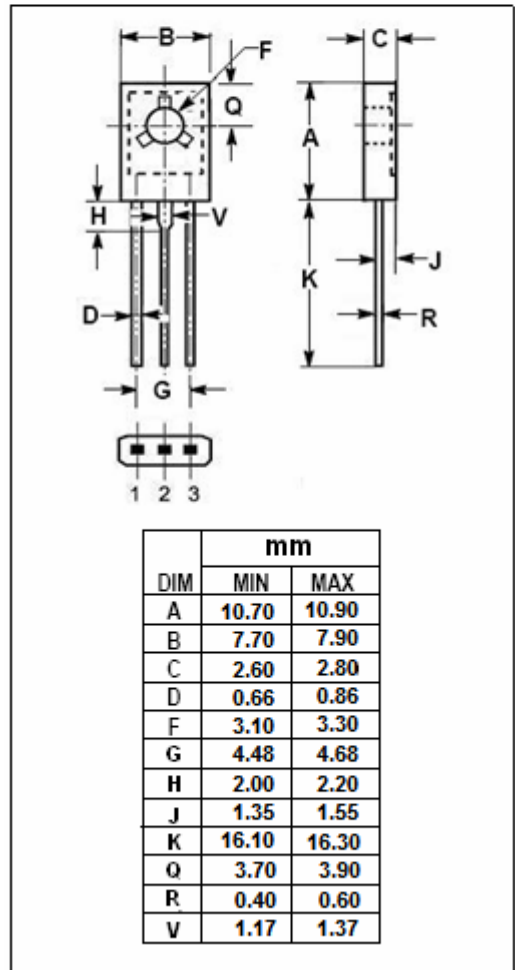
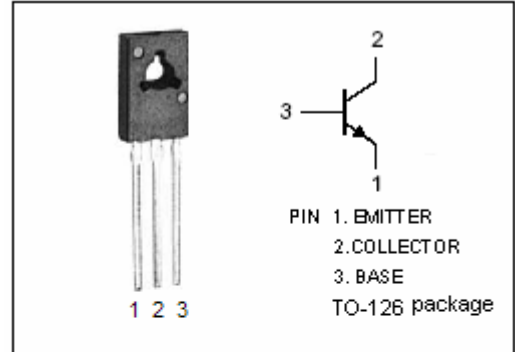
- DC Current Gain-  
:  $h_{FE} = 20(\text{Min}) @ I_C = 1A$
- Complement to Type BD376/378/380

APPLICATIONS

- Designed for medium power linear and switching applications

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT	
$V_{CBO}$	Collector-Base Voltage	BD375	50	V
		BD377	75	
		BD379	100	
$V_{CEO}$	Collector-Emitter Voltage	BD375	45	V
		BD377	60	
		BD379	80	
$V_{EBO}$	Emitter-Base Voltage	5	V	
$I_C$	Collector Current-Continuous	2	A	
$I_{CM}$	Collector Current-Peak	3	A	
$I_B$	Base Current-Continuous	1	A	
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	25	W	
$T_J$	Junction Temperature	150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$	



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## 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	BD375	$I_C=100\text{mA}; I_B=0$	45			V	
		BD377		60				
		BD379		80				
$V_{CBO}$	Collector-Base Voltage	BD375	$I_C=0.1\text{mA}; I_E=0$	50			V	
		BD377		75				
		BD379		100				
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.1\text{A}$			1.0	V		
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}; V_{CE}=2\text{V}$			1.5	V		
$I_{CBO}$	Collector Cutoff Current	BD375	$V_{CB}=45\text{V}; I_E=0$			2	$\mu\text{A}$	
		BD377		$V_{CB}=60\text{V}; I_E=0$				2
		BD379		$V_{CB}=80\text{V}; I_E=0$				2
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.1	mA		
$h_{FE-1}$	DC Current Gain	$I_C=0.15\text{A}; V_{CE}=2\text{V}$	40		375			
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	20					

## Switching Times

$t_{on}$	Turn-On Time	$I_C=0.5\text{A}; I_{B1}=-I_{B2}=50\text{mA}; V_{CC}=30\text{V}$		0.05		$\mu\text{s}$
$t_{off}$	Turn-Off Time			0.5		$\mu\text{s}$

◆  $h_{FE-1}$  Classifications

6	10	16	25
40-100	63-160	100-250	150-375