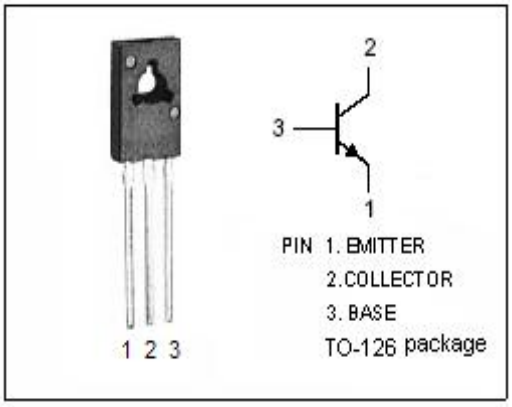
isc Silicon NPN Power Transistors — BD375/377/379

DESCRIPTION

- DC Current Gain-
  : h_{FE}= 20(Min)@ I_C= 1A
- Complement to Type BD376/378/380
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

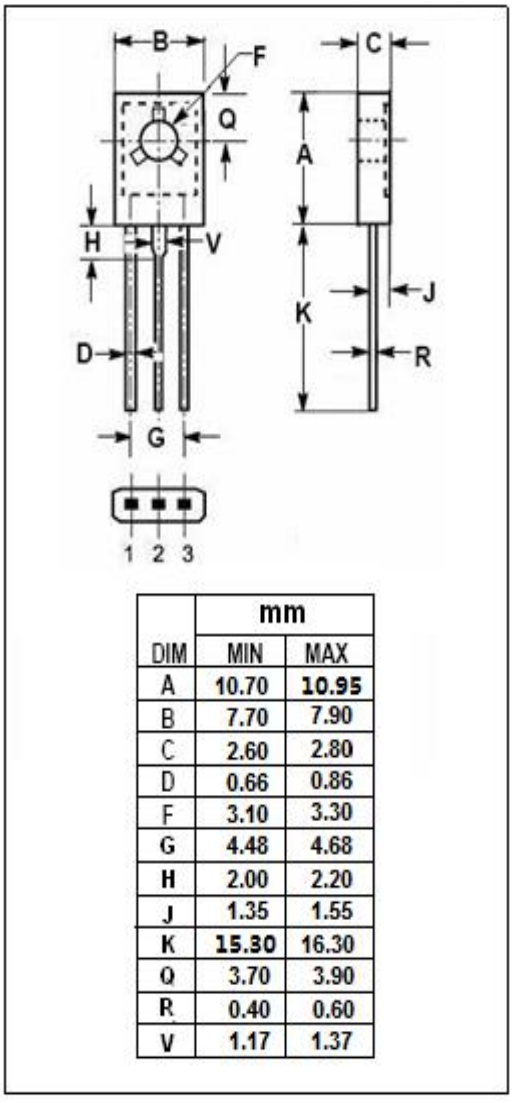


APPLICATIONS

- Designed for medium power linear and switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃		25	W
T_J	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-55~150	℃



DIM	mm MIN	MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BD375	I_C= 30mA ; I_B= 0	45			V
		BD377		60			
		BD379		80			
V_{CBO}	Collector-Base Voltage	BD375	I_C= 0.1mA ; I_E= 0	50			V
		BD377		75			
		BD379		100			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 1A; I_B= 0.1A			1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= 1A; V_{CE}= 2V			1.5	V
I_{CBO}	Collector Cutoff Current	BD375	V_{CB}= 45V; I_E= 0			2	μA
		BD377	V_{CB}= 60V; I_E= 0			2	
		BD379	V_{CB}= 80V; I_E= 0			2	
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0			0.1	mA
h_{FE-1}	DC Current Gain		I_C= 0.15A ; V_{CE}= 2V	40		375	
h_{FE-2}	DC Current Gain		I_C= 1A; V_{CE}= 2V	20			
Switching Times							
t_{on}	Turn-On Time		I_C= 0.5A; I_{B1}= -I_{B2}= 50mA; V_{CC}= 30V		0.05		μs
t_{off}	Turn-Off Time				0.5		μs

◆ **h_{FE-1} Classifications**

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