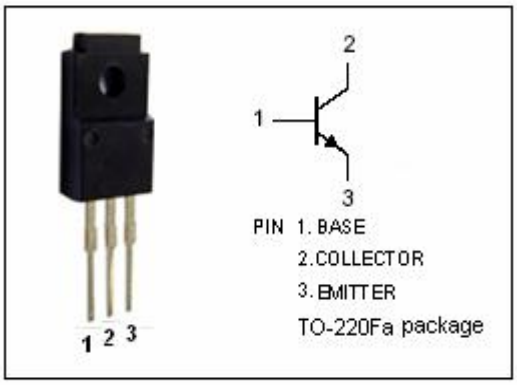
isc Silicon NPN Power Transistors BDT41F/41AF/41BF/41CF

DESCRIPTION

- DC Current Gain -h_{FE} = 30(Min)@ I_C= 0.3A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 40V(Min)- BDT41F; 60V(Min)- BDT41AF
  80V(Min)- BDT41BF; 100V(Min)- BDT41CF
- Complement to Type BDT42F/42AF/42BF/42CF
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

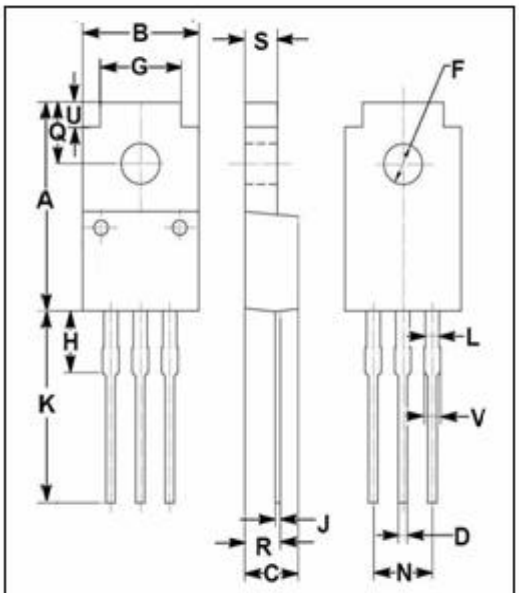


APPLICATIONS

- Designed for use in general purpose amplifer and switching applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	BDT41F	80	V
		BDT41AF	100	
		BDT41BF	120	
		BDT41CF	140	
V_{CEO}	Collector-Emitter Voltage	BDT41F	40	V
		BDT41AF	60	
		BDT41BF	80	
		BDT41CF	100	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		6	A
I_{CM}	Collector Current-Peak		10	A
I_B	Base Current		3	A
P_C	Collector Power Dissipation T_C=25℃		32	W
T_j	Junction Temperature		150	℃
T_{stg}	Storage Temperature Range		-65~150	℃



DIM	mm MIN	MAX
A	16.85	17.15
B	9.54	10.10
C	4.35	4.65
D	0.75	0.90
F	3.20	3.40
G	6.90	7.20
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.55	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BDT41F	I_C= 30mA; I_B= 0	40		V
		BDT41AF		60		
		BDT41BF		80		
		BDT41CF		100		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage		I_C= 6A; I_B= 0.6A		1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage		I_C= 6A ; V_{CE}= 4V		2.0	V
I_{CES}	Collector Cutoff Current	BDT41F	V_{CE}= 40V; V_{EB}= 0		0.4	mA
		BDT41AF	V_{CE}= 60V; V_{EB}= 0			
		BDT41BF	V_{CE}= 80V; V_{EB}= 0			
		BDT41CF	V_{CE}= 100V; V_{EB}= 0			
I_{CEO}	Collector Cutoff Current	BDT 41/41A	V_{CE}= 30V; I_B= 0		0.2	mA
		BDT41B/41C	V_{CE}= 60V; I_B= 0			
I_{EBO}	Emitter Cutoff Current		V_{EB}= 5V; I_C= 0		0.5	mA
h_{FE-1}	DC Current Gain		I_C= 0.3A ; V_{CE}= 4V	30		
h_{FE-2}	DC Current Gain		I_C= 3A ; V_{CE}= 4V	15	75	
f_T	Current-Gain—Bandwidth Product		I_C= 0.5A ; V_{CE}= 10V	3		MHz