

Silicon PNP Power Transistor

BD250/A/B/C

DESCRIPTION

- Collector Current $-I_C = -25A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -45V(\text{Min})$ - BD250; $-60V(\text{Min})$ - BD250A
 $-80V(\text{Min})$ - BD250B; $-100V(\text{Min})$ - BD250C
- Complement to Type BD249/A/B/C

APPLICATIONS

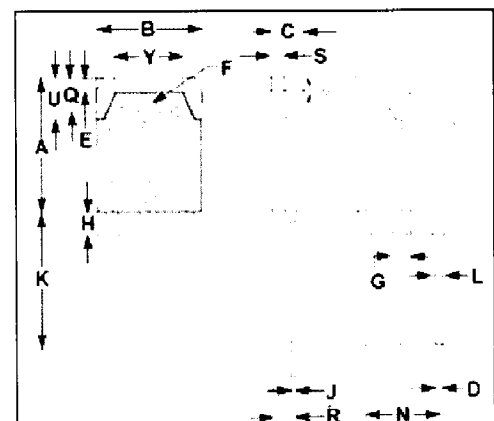
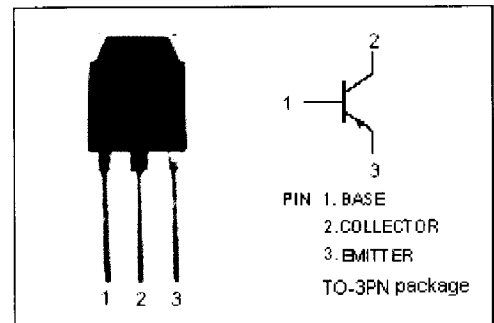
- Designed for use in general purpose power amplifier and switching applications

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

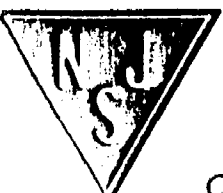
SYMBOL	PARAMETER	VALUE	UNIT	
V_{CER}	Collector-Emitter Voltage ($R_{BE} = 100 \Omega$)	BD250	-55	V
		BD250A	-70	
		BD250B	-90	
		BD250C	-115	
V_{CEO}	Collector-Emitter Voltage	BD250	-45	V
		BD250A	-60	
		BD250B	-80	
		BD250C	-100	
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current-Continuous	-25	A	
I_{CM}	Collector Current-Peak	-40	A	
I_B	Base Current	-5	A	
	Collector Power Dissipation @ $T_a=25^\circ C$	3	W	
Collector Power Dissipation @ $T_c=25^\circ C$	125			
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	1.0	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	BD250	-45			V	
		BD250A	-60				
		BD250B	-80				
		BD250C	-100				
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -15\text{A}; I_B = -1.5\text{A}$			-1.8	V	
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -25\text{A}; I_B = -5\text{A}$			-4.0	V	
$V_{BE(on)-1}$	Base-Emitter On Voltage	$I_C = -15\text{A}; V_{CE} = -4\text{V}$			-2.0	V	
$V_{BE(on)-2}$	Base-Emitter On Voltage	$I_C = -25\text{A}; V_{CE} = -4\text{V}$			-4.0	V	
I_{CES}	Collector Cutoff Current	BD250	$V_{CE} = -55\text{V}; V_{BE} = 0$			-0.7	mA
		BD250A	$V_{CE} = -70\text{V}; V_{BE} = 0$				
		BD250B	$V_{CE} = -90\text{V}; V_{BE} = 0$				
		BD250C	$V_{CE} = -115\text{V}; V_{BE} = 0$				
I_{CEO}	Collector Cutoff Current	BD250/A	$V_{CE} = -30\text{V}; I_B = 0$			-1.0	mA
		BD250B/C	$V_{CE} = -60\text{V}; I_B = 0$				
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-1.0	mA	
h_{FE-1}	DC Current Gain	$I_C = -1.5\text{A}; V_{CE} = -4\text{V}$	25				
h_{FE-2}	DC Current Gain	$I_C = -15\text{A}; V_{CE} = -4\text{V}$	10				
h_{FE-3}	DC Current Gain	$I_C = -25\text{A}; V_{CE} = -4\text{V}$	5				
Switching times							
t_{on}	Turn-on Time	$I_C = -5\text{A}; I_{B1} = -I_{B2} = -0.5\text{A};$ $R_L = 5\ \Omega; V_{BE(off)} = -5\text{V}$		0.3		μs	
t_{off}	Turn-off Time			0.9		μs	