

SPTECH Silicon PNP Power Transistor

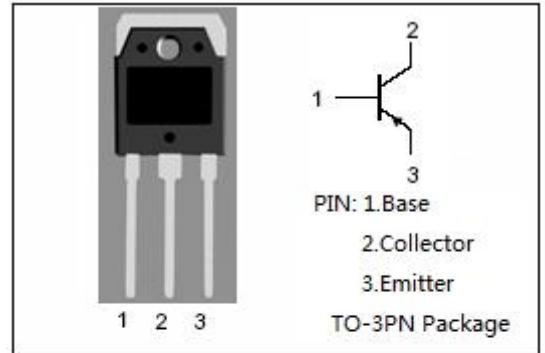
BD250/A/B/C

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

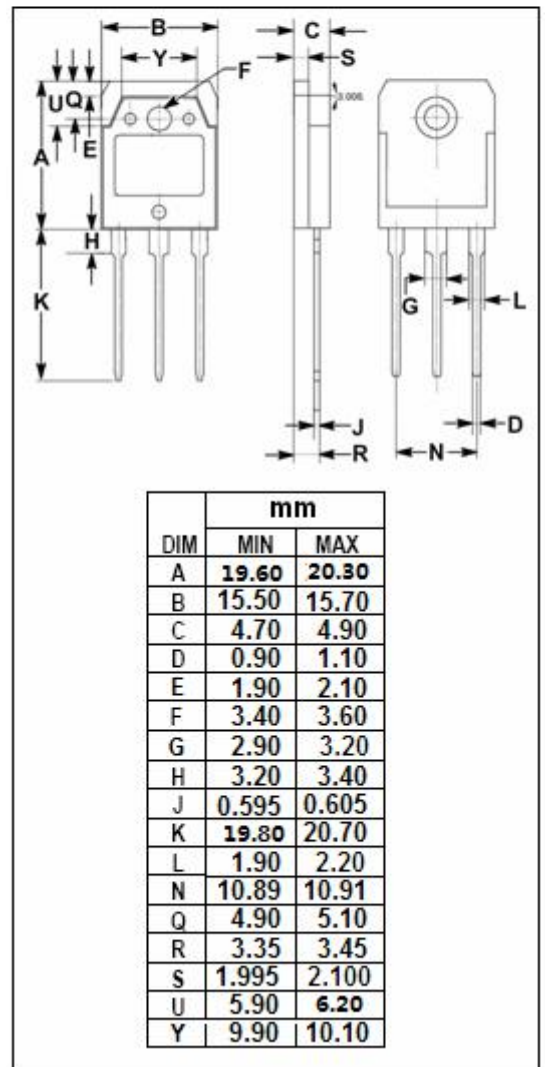
APPLICATIONS

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



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

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	
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	3	W	
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	125		
T_J	Junction Temperature	150	$^\circ\text{C}$	
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$	



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	BD250	I _C = -30mA; I _B = 0	-45			V
		BD250A		-60			
		BD250B		-80			
		BD250C		-100			
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage		I _C = -15A; I _B = -1.5A			-1.8	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage		I _C = -25A; I _B = -5A			-4.0	V
V _{BE(on)-1}	Base-Emitter On Voltage		I _C = -15A; V _{CE} = -4V			-2.0	V
V _{BE(on)-2}	Base-Emitter On Voltage		I _C = -25A; V _{CE} = -4V			-4.0	V
I _{CES}	Collector Cutoff Current	BD250	V _{CE} = -55V; V _{BE} = 0			-0.7	mA
		BD250A	V _{CE} = -70V; V _{BE} = 0				
		BD250B	V _{CE} = -90V; V _{BE} = 0				
		BD250C	V _{CE} = -115V; V _{BE} = 0				
I _{CEO}	Collector Cutoff Current	BD250/A	V _{CE} = -30V; I _B = 0			-1.0	mA
		BD250B/C	V _{CE} = -60V; I _B = 0				
I _{EBO}	Emitter Cutoff Current		V _{EB} = -5V; I _C = 0			-1.0	mA
h _{FE-1}	DC Current Gain		I _C = -1.5A; V _{CE} = -4V	25			
h _{FE-2}	DC Current Gain		I _C = -15A; V _{CE} = -4V	10			
h _{FE-3}	DC Current Gain		I _C = -25A; V _{CE} = -4V	5			

Switching times

t _{on}	Turn-on Time	I _C = -5A; I _{B1} = -I _{B2} = -0.5A; R _L = 5 Ω ; V _{BE(off)} = -5V		0.2		μ s
t _{off}	Turn-off Time			0.4		μ s