

SPTECH Silicon NPN Power Transistor**2SD844****DESCRIPTION**

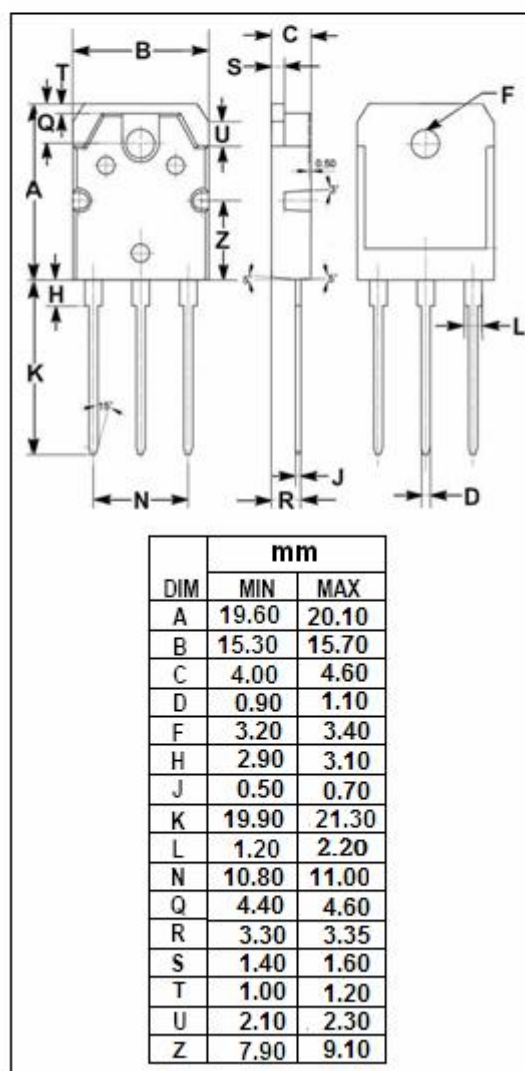
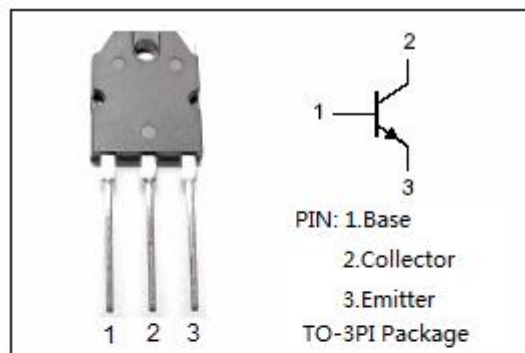
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V$ (Min)
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.4V$ (Max)@ $I_C = 4A$
- High Collector Power Dissipation
: $P_C = 60W$ @ $T_C = 25^\circ C$
- Complement to Type 2SB754

APPLICATIONS

- High current switching applications
- Power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_E	Emitter Current-Continuous	7	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ C$	2.5	W
	Collector Power Dissipation @ $T_C = 25^\circ C$	60	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



SPTECH Silicon NPN Power Transistor**2SD844****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	50			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA ; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A ; I _B = 0.4A		0.2	0.4	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 4A ; V _{CE} = 1V		0.9	1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V ; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V ; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 1V	70		240	
h _{FE-2}	DC Current Gain	I _C = 4A ; V _{CE} = 1V	30			
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 5V		15		MHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V ; f _{test} = 1.0MHz		250		pF

◆ **h_{FE-1} Classifications**

O	Y
70-140	120-240