

SPTECH Silicon NPN Power Transistor

2SC2837

DESCRIPTION

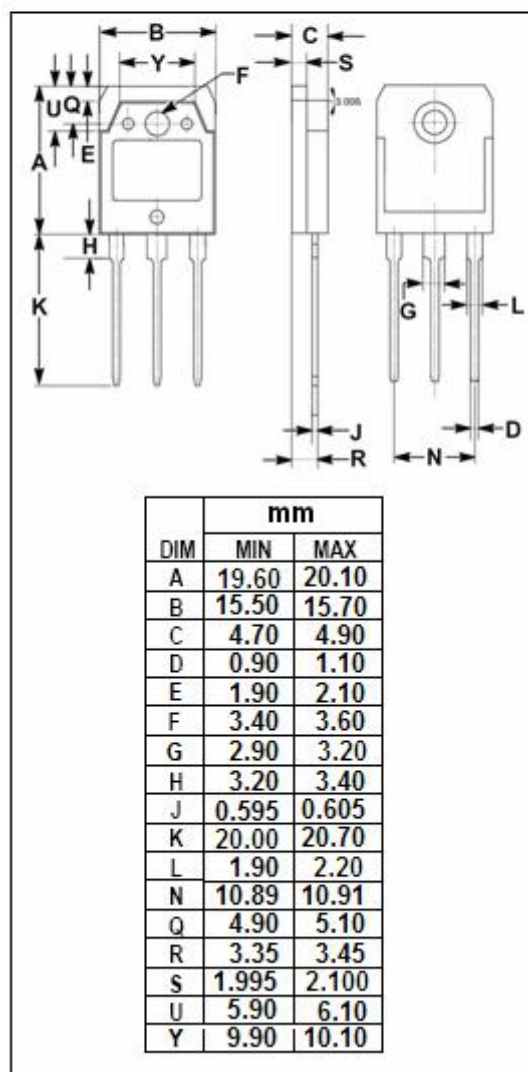
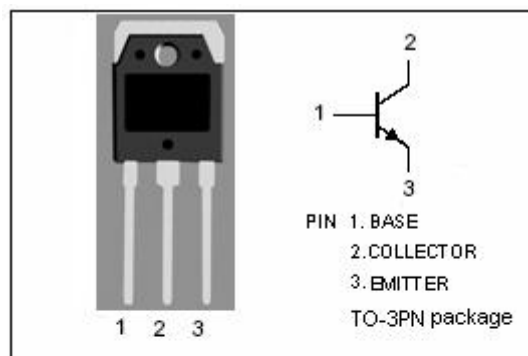
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}=150V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1186

APPLICATIONS

- Designed for audio and general purpose applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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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	$I_C=25\text{mA}$; $I_B=0$	150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5.0\text{A}$; $I_B=0.5\text{A}$			2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=150\text{V}$; $I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$; $I_C=0$			100	μA
h_{FE}	DC Current Gain	$I_C=3\text{A}$; $V_{CE}=4\text{V}$	50		180	
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=80\text{V}$; $f_{\text{test}}=1.0\text{MHz}$		60		pF
f_T	Current-Gain—Bandwidth Product	$I_E=-1\text{A}$; $V_{CE}=12\text{V}$		70		MHz

Switching times

t_{on}	Turn-on Time	$I_C=5\text{A}$, $R_L=12\Omega$, $I_{B1}=-I_{B2}=0.5\text{A}$, $V_{CC}=60\text{V}$		0.2		μs
t_{stg}	Storage Time			1.4		μs
t_f	Fall Time			0.35		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180