

Silicon NPN Power Transistor

2SC2837

DESCRIPTION

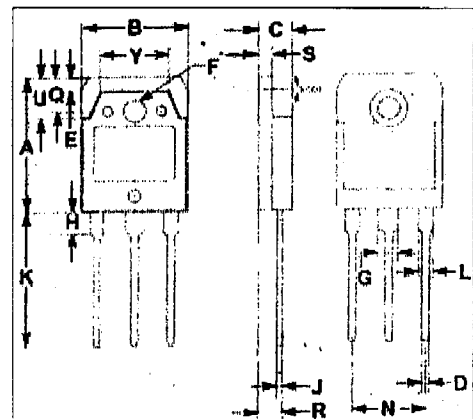
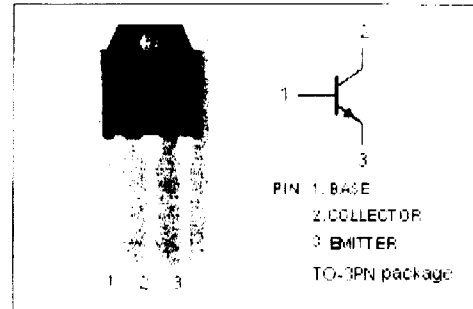
- High Collector-Emitter Breakdown Voltage-
 $V_{BR}(CEO) = 150V(\text{Min})$
- Good Linearity of h_{FE}
- Complement to Type 2SA1186

APPLICATIONS

- Designed for audio and general purpose applications

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CB0}	Collector-Base Voltage	150	V
V_{CE0}	Collector-Emitter Voltage	150	V
V_{EB0}	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	°C
T_{stg}	Storage Temperature Range	-55~150	°C



mm		
DIM	MIN	MAX
A	19.50	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	3.20
H	3.20	3.40
I	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
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	$I_C = 25\text{mA}, I_B = 0$	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	$V_{CE} = 150\text{V}, I_B = 0$			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_{OUT}	Output Capacitance	$I_C = 0, V_{CB} = 80\text{V}, f_{TEST} = 1.0\text{MHz}$		60		pF
f _T	Current-Gain—Bandwidth Product	$I_C = -1\text{A}, V_{CE} = 12\text{V}$		70		MHz

Switching times

t_{ON}	Turn on Time	$I_C = 5\text{A}, R_T = 12\Omega$ $I_{B1} = -I_{B2} = 0.5\text{A}, V_{CC} = 60\text{V}$	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