New Jersey Semi-Conductor Products, Inc.

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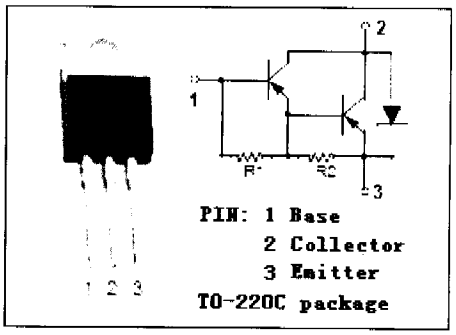
Silicon PNP Darlington Power Transistor — 2SB886

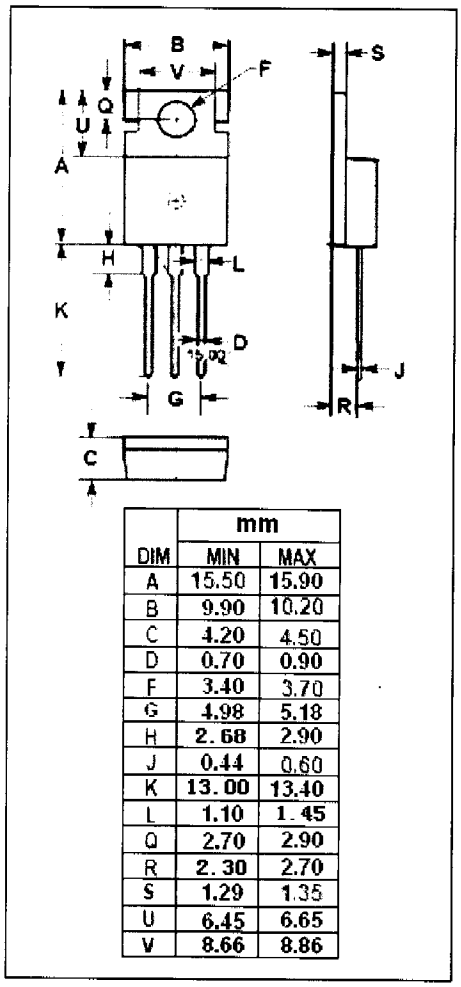
DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1500(Min)@ I_C= -4A
- Wide Area of Safe Operation
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = -1.5V(Max)@ I_C= -4A
- Complement to Type 2SD1196



APPLICATIONS

- Designed for motor drivers, printer hammer drivers, relay drivers, voltage regulators applications.



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.90	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	13.00	13.40
L	1.10	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-110	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak	-12	A
P_C	Collector Power Dissipation T_C=25℃	40	W
	Collector Power Dissipation T_a=25℃	1.75	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -50mA, R_{BE}= ∞	-100			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= -5mA, I_E= 0	-110			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -4A, I_B= -8mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -4A, I_B= -8mA			-2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -80V, I_E= 0			-100	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-3	mA
h_{FE}	DC Current Gain	I_C= -4A; V_{CE}= -3V	1500			
f_T	Current-Gain—Bandwidth Product	I_C= -4A; V_{CE}= -5V		20		MHz

Switching times

t_{on}	Turn-on Time	R_L= 12.5Ω , V_{CC}≈ -50V I_C= -4A; I_{B1}= -I_{B2}= -8mA		0.7		μ s
t_{stg}	Storage Time			1.4		μ s
t_f	Fall Time			1.5		μ s