New Jersey Semi-Conductor Products, Inc.

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Silicon PNP Power Transistor

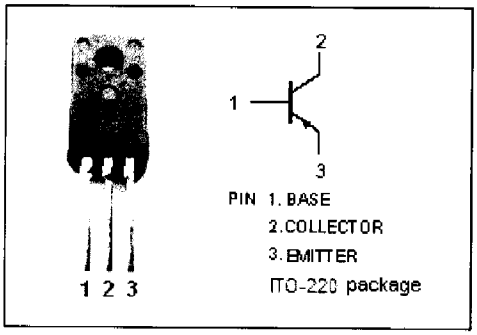
2SA1599

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= -40(V)(Min.)
- Low Collector Saturation Voltage
  :$V_{CE(sat)}$= -0.3(V)(Max.)@I_C= -5A
- Large Current Capability-I_C= -10A

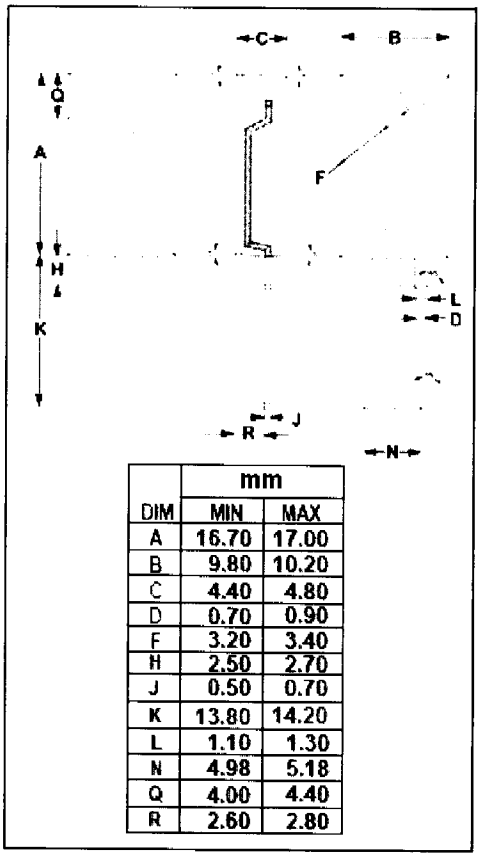
APPLICATIONS

- Designed for mid-switching applications, and is ideal for use as a ramp driver.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-10	A
I_{CM}	Collector Current-Peak	-20	A
I_B	Base Current-Continuous	-1.5	A
I_{BM}	Base Current-Peak	-2	A
P_C	Total Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	16.70	17.00
B	9.80	10.20
C	4.40	4.80
D	0.70	0.90
F	3.20	3.40
H	2.50	2.70
J	0.50	0.70
K	13.80	14.20
L	1.10	1.30
N	4.98	5.18
Q	4.00	4.40
R	2.60	2.80

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -10mA; I_B= 0	-40			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -5A; I_B= -0.25A			-0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -5A; I_B= -0.25A			-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -60V; I_E= 0			-100	μ A
I_{CEO}	Collector Cutoff Current	V_{CE}= -40V; I_B= 0			-100	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= -7V; I_C= 0			-100	μ A
h_{FE}	DC Current Gain	I_C= -5A; V_{CE}= -2V 、	70			
f_T	Current-Gain—Bandwidth Product	I_C= -1A; V_{CE}= -10V		50		MHz

Switching Times

t_{on}	Turn-on Time	I_C= -5A, I_{B1}= -I_{B2}= -0.5A, R_L= 5Ω , V_{BB2}= -4V;			0.3	μ s
t_{stg}	Storage Time				1.5	μ s
t_f	Fall Time				0.5	μ s