New Jersey Semi-Conductor Products, Inc.

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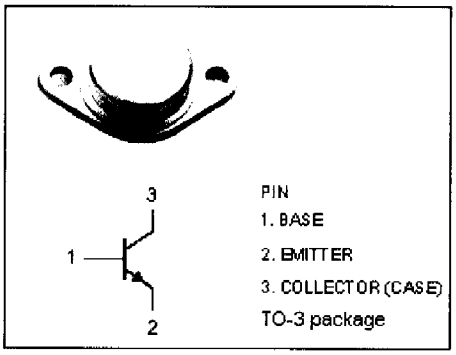
Silicon NPN Power Transistor — 2N6754

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 500(Min.)
- High Switching Speed
- Low Collector Saturation Voltage
- Wide Area of Safe Operation



APPLICATIONS

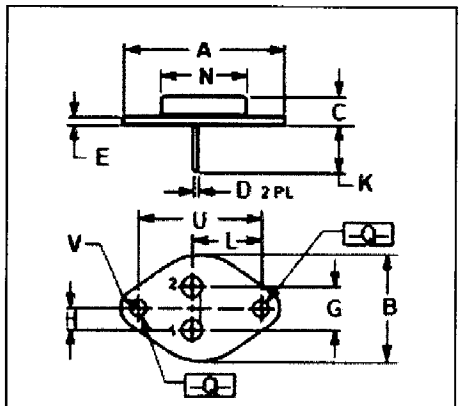
- Off-line power supplies
- High-voltage inverters
- Switching regulators

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	1000	V
$V_{CEX(SUS)}$	Collector-Emitter Voltage	550	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation@T_C=25℃	150	W
T_J	Junction Temperature	175	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 200mA; I_B= 0	500		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 1A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 3A		3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 1A		1.3	V
I_{CEV}	Collector Cutoff Current	V_{CE}= 1000V; V_{BE}= -1.5V V_{CE}= 1000V; V_{BE}= -1.5V; T_C=100℃		0.1 1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0		2.0	mA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 3V	8	40	
f_T	Current Gain-Bandwidth Product	I_C= 0.2A ; V_{CE}= 10V	15	60	MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 0.1MHz	50	250	pF

Switching times-Resistive Load

t_d	Delay Time	I_C= 5A; I_{B1}= -I_{B2}= 1A; V_{CC}= 250V; V_{BE}= -6V; t_p= 20 μ s		0.1	μ s
t_r	Rise Time			0.4	μ s
t_s	Storage Time			3.0	μ s
t_f	Fall Time			0.4	μ s