New Jersey Semi-Conductor Products, Inc.

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Silicon NPN Power Transistors

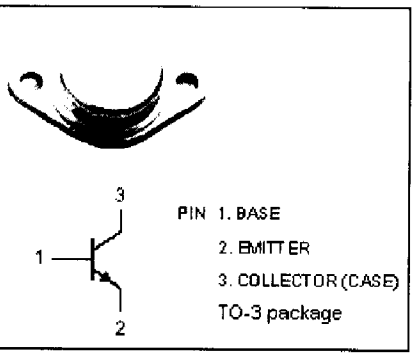
BUY79

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 350V(Min.)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.5V(Max.)@ I_C= 5A

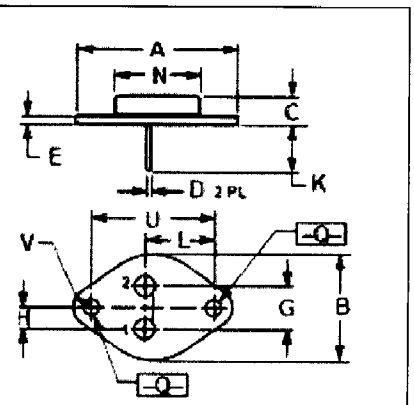
APPLICATIONS

- Designed for use as high-speed power switches at high voltages.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	750	V
V_{CES}	Collector-Emitter Voltage	750	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-peak	10	A
P_C	Collector Power Dissipation @T_C≤75℃	60	W
T_j	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.66	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 0.1A; I_B= 0	350			V
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	I_C= 1mA; I_E= 0	750			V
$V_{(BR)CEV}$	Collector-Emitter Breakdown Voltage	I_C= 1mA; V_{BE}= -3.5V	750			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 1.25A			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 1.25A			1.7	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 400V; I_E= 0			1.0	mA
I_{CES}	Collector Cutoff Current	V_{CE}= 400V; V_{BE}= 0; T_C= 150℃			15	mA
h_{FE}	DC Current Gain	I_C= 5A; V_{CE}= 1.5V	5			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 10V		15		MHz
t_f	Fall Time	I_C= 3A; I_{B1}= -I_{B2}= 0.6A			1.0	μs