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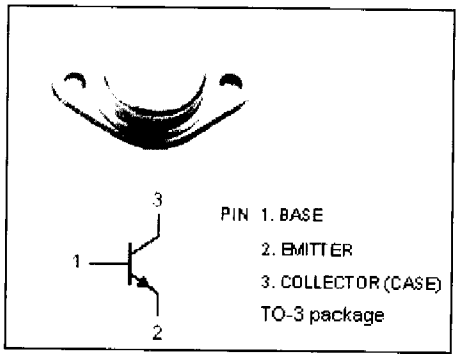
Silicon NPN Power Transistors — TIP562/563

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 300V(Min)- TIP562
  = 400V(Min)- TIP563
- High Power Dissipation

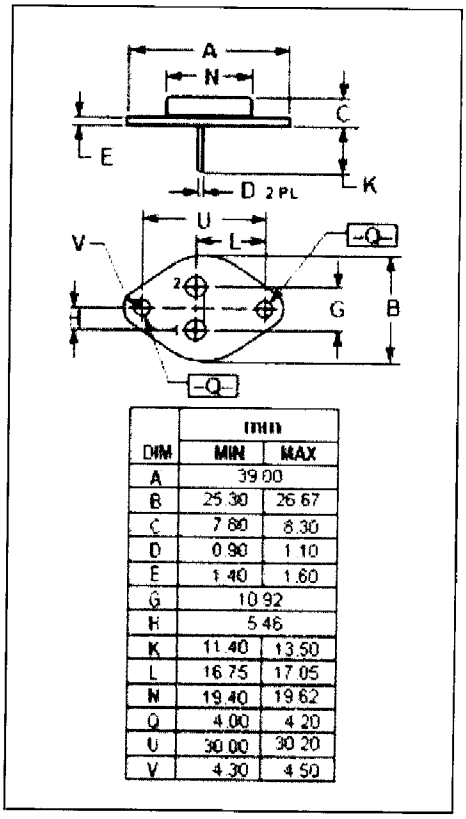
APPLICATIONS

- Designed for converters, inverters, pulse-width-modulated regulators, and a variety of power switching applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-Base Voltage	TIP562	300	V
		TIP563	400	
$V_{CEO(SUS)}$	Collector-Emitter Voltage	TIP562	300	V
		TIP563	400	
V_{EBO}	Emitter-Base Voltage		8	V
I_C	Collector Current-Continuous		10	A
I_{CM}	Collector Current-Peak		15	A
I_B	Base Current-Continuous		2	A
P_C	Collector Power Dissipation @T_C=100℃		100	W
T_J	Junction Temperature		200	℃
T_{stg}	Storage Temperature		-65~200	℃



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	1.0	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	TIP562	I_C=100mA ; I_B=0	300			V
		TIP563		400			
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		I_C= 10A; I_B= 1.66A			1.2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		I_C= 15A; I_B= 5A			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		I_C= 10A; I_B= 1.66A			1.4	V
I_{CEO}	Collector Cutoff Current	TIP562	V_{CE}= 270V;I_B= 0			1.0	mA
		TIP563	V_{CE}= 360V;I_B= 0			1.0	
I_{CBO}	Collector Cutoff Current	TIP562	V_{CB}= 300V;I_E= 0			0.1	mA
		TIP563	V_{CB}= 400V;I_E= 0			0.1	
I_{EBO}	Emitter Cutoff Current		V_{EB}= 8V; I_C=0			5.0	mA
h_{FE-1}	DC Current Gain		I_C= 1A ; V_{CE}= 4V	20			
h_{FE-2}	DC Current Gain		I_C= 10A ; V_{CE}= 4V	8			

Switching Times

t_d	Delay Time	V_{CC}= 180V;V_{BE}= -5.2V I_C= 10A; I_{B1}= -I_{B2}= 2A		0.05		μs
t_r	Rise Time			0.5		μs
t_{stg}	Storage Time			1.2		μs
t_f	Fall Time			0.3		μs