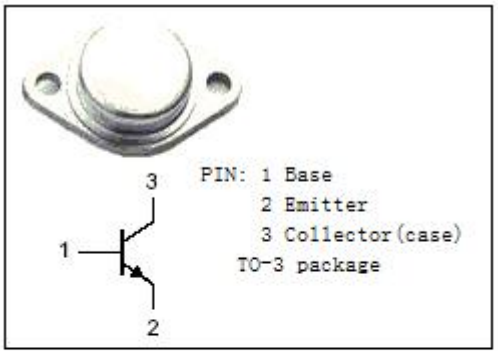
isc Silicon NPN Power Transistor BUP54

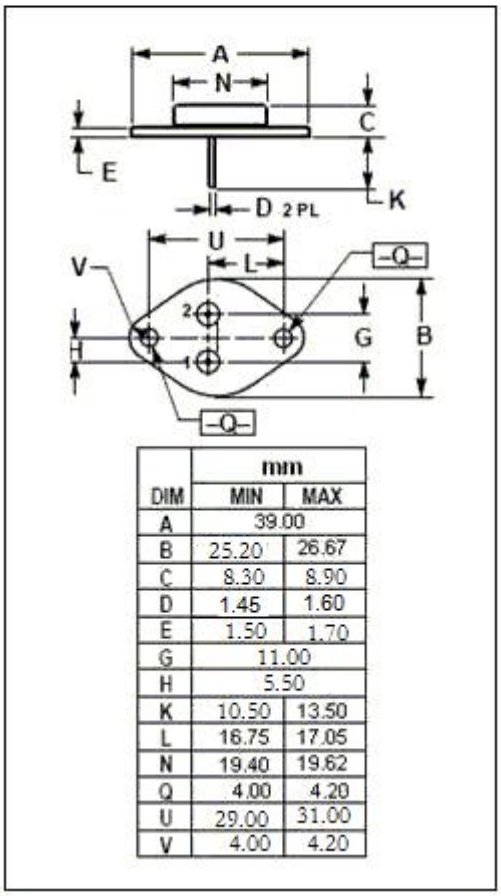
DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V (Max.) @I_C= 10A
- High Switching Currents.
- High Reliability.
- Military options available.



APPLICATIONS

- Designed for switching regulators,motor drive control high power convertors applications.



DIM	mm MIN	MAX
A	39.00	
B	25.20	26.67
C	8.30	8.90
D	1.45	1.60
E	1.50	1.70
G	11.00	
H	5.50	
K	10.50	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	29.00	31.00
V	4.00	4.20

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	275	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	50	A
I_{CM}	Collector Current-Peak	70	A
P_C	Collector Power Dissipation @T_C=25℃	300	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-55~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.58	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 2A			0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 40A ;I_B= 5.5A			1.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 20A ;I_B= 2A			1.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 40A ;I_B= 4A			1.3	V
I_{CEX}	Collector Cutoff Current	V_{CE}= 500V;V_{BE}= -1.5V V_{CE}= 500V;V_{BE}= -1.5V;T_C=125℃			0.1 5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 16A ; V_{CE}= 4V	20			
h_{FE-2}	DC Current Gain	I_C= 35A ; V_{CE}= 4V	10			
Switching Times						
t_s	Storage Time	I_C= 20A; I_{B1}=-I_{B2}= 10A; V_{CC}= 200V; R_C= 5Ω			1.8	μs
t_f	Fall Time				0.35	μs