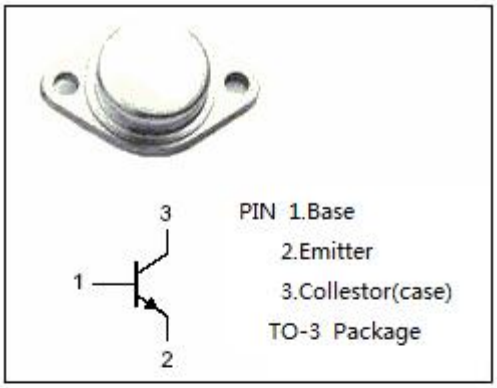
isc Silicon NPN Power Transistor 2N3442

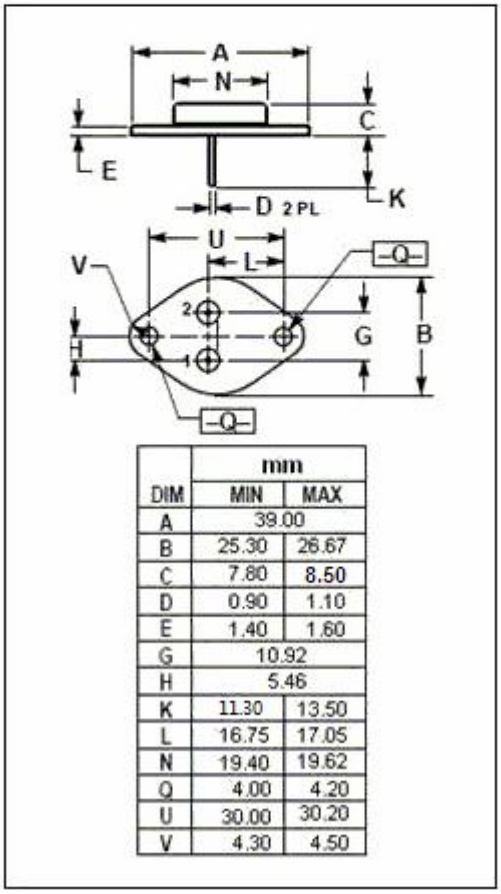
DESCRIPTION

- Excellent Safe Operating Area
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 140V(Min.)
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 5.0V(Max)@ I_C = 10A

APPLICATIONS

- Designed for use in industrial and commercial equipment including high fidelity audio amplifiers, series and shunt regulators and power switches.





DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CP}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	7	A
P_C	Collector Power Dissipation@T_C=25℃	117	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.49	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	140		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 2A		5.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 10A; V_{CE}= 4V		5.7	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 140V; I_B= 0		10	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7.0V; I_C= 0		1	mA
h_{FE-1}	DC Current Gain	I_C= 3A; V_{CE}= 4V	20	70	
h_{FE-2}	DC Current Gain	I_C= 10A; V_{CE}= 4V	4		