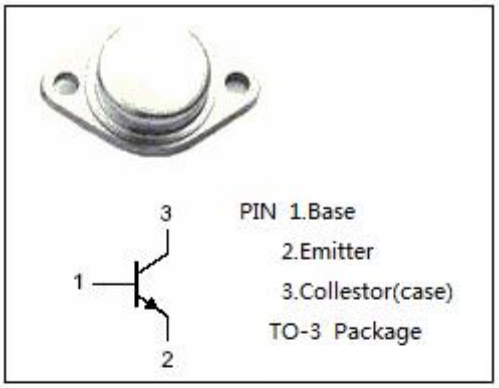
isc Silicon NPN Power Transistor — 2SC3058A

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$ = 450V(Min)
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ ≤ 1 V@ I_C = 4A
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

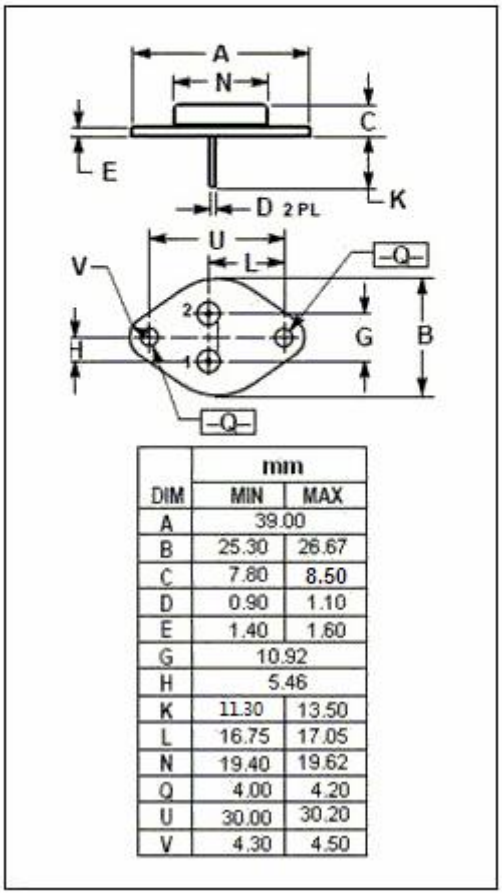


APPLICATIONS

- For switching regulator and DC/DC converter applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	10	A
P_C	Collector Power Dissipation @ T_C=25℃	200	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	8.50
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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA ; I_B=0	450			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1 mA; I_E= 0	600			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= 20A; I_B= 4A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 20A; I_B= 4A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			100	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			100	uA
$h_{FE\ -1}$	DC Current Gain	I_C= 1A; V_{CE}= 5V	15		50	
$h_{FE\ -2}$	DC Current Gain	I_C= 20A; V_{CE}= 5V	10		40	
f_T	Current-Gain—Bandwidth Product	I_C= 4A; V_{CE}= 10V		30		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		420		pF