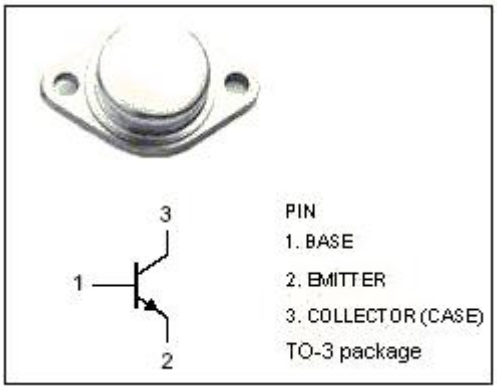
isc Silicon NPN Power Transistor 2SC2433

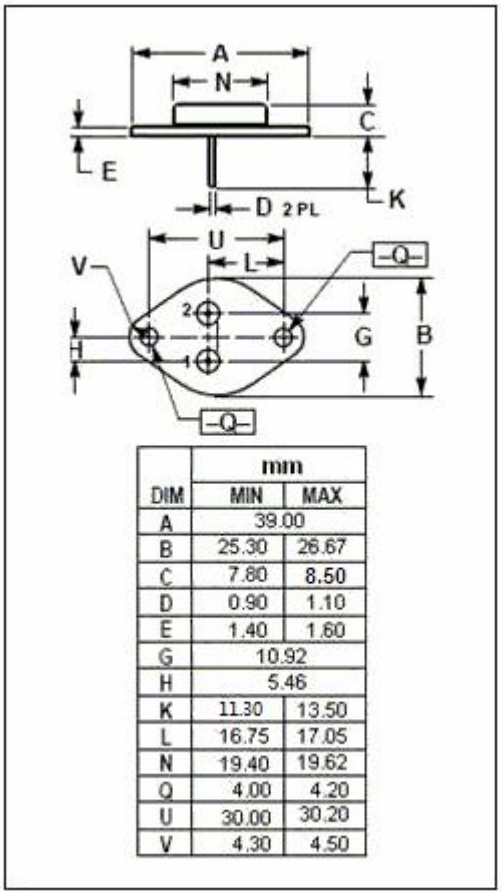
DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  $V_{(BR)CEO}$= 120V(Min)
- High Current Capability
- Wide Area of Safe Operation
- Complement to Type 2SA1043
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Power switching applications
- High frequency power amplifier
- Switching regulators
- DC-DC converters



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	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	30	A
I_B	Base Current-Continuous	10	A
P_C	Collector Power Dissipation @ T_C=25℃	150	W
T_J	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃

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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; R_{BE}= ∞	120			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 50 μA; I_E= 0	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA ; I_C= 0	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 15A; I_B= 1.5A			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 15A; I_B= 1.5A			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 120V ; I_E= 0			50	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 120V ; I_E= 0			1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 4V; I_C= 0			50	μA
h_{FE-1}	DC Current Gain	I_C= 3A ; V_{CE}= 5V	35		200	
h_{FE-2}	DC Current Gain	I_C= 30A ; V_{CE}= 5V	7			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1.0MHz		1000		pF
f_T	Current-Gain—Bandwidth Product	I_C= 2A ; V_{CE}= 10V		60		MHz

Switching Times

t_r	Rise Time	I_C= 15A; I_{B1}= -I_{B2}= 1.5A; R_L= 2Ω		0.10		μs
t_{stg}	Storage Time			0.10		μs
t_f	Fall Time			0.10		μs

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