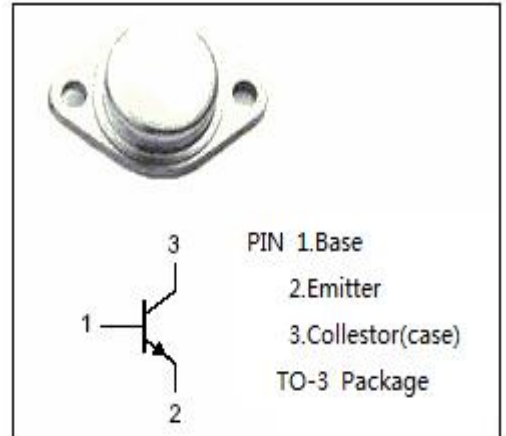


**isc Silicon NPN Power Transistor**
**BU546**
**DESCRIPTION**

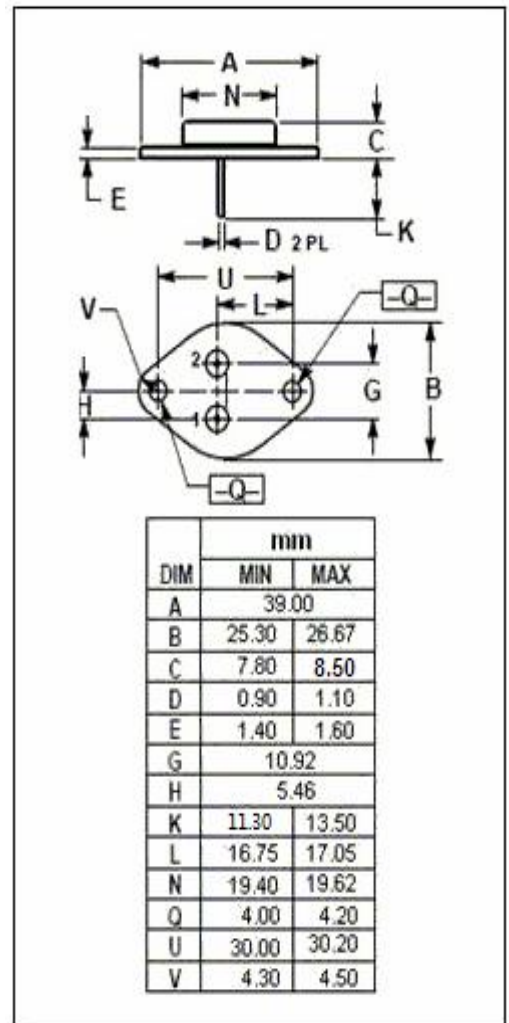
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 550V(\text{Min.})$
- High Speed Switching
- High Power Dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in switching mode power supply.


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector-Emitter Voltage	1300	V
$V_{CEO}$	Collector-Emitter Voltage	550	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	6	A
$I_{CM}$	Collector Current-Peak	8	A
$I_B$	Base Current-Continuous	2	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	100	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~150	$^{\circ}C$


**THERMAL CHARACTERISTICS**


SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^{\circ}C/W$

## isc Silicon NPN Power Transistor

## BU546

## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> =0	550			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA; I <sub>C</sub> = 0	6			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 6A; I <sub>B</sub> = 2A			1.8	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage 	I <sub>C</sub> = 6A; I <sub>B</sub> = 2A			2.0	V
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = 1300V; V <sub>BE</sub> = 0; V <sub>CE</sub> = 1200V; V <sub>BE</sub> = 0; T <sub>C</sub> = 150°C			1.0 2.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 3.2A; V <sub>CE</sub> = 2V	6			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 1.5A; V <sub>CE</sub> = 5V	8			
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = 10mA; V <sub>CE</sub> = 5V	6			
h <sub>FE-4</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 3V	5.5			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 10V		10		MHz
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 3.2A; I <sub>B</sub> = 0.7A			0.5	μs

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