

isc Silicon NPN Power Transistor

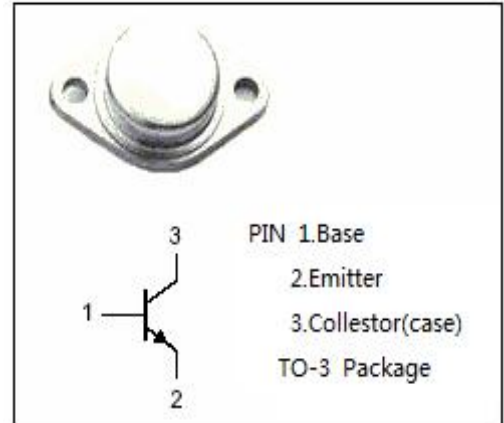
2SD1186

**DESCRIPTION**

- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

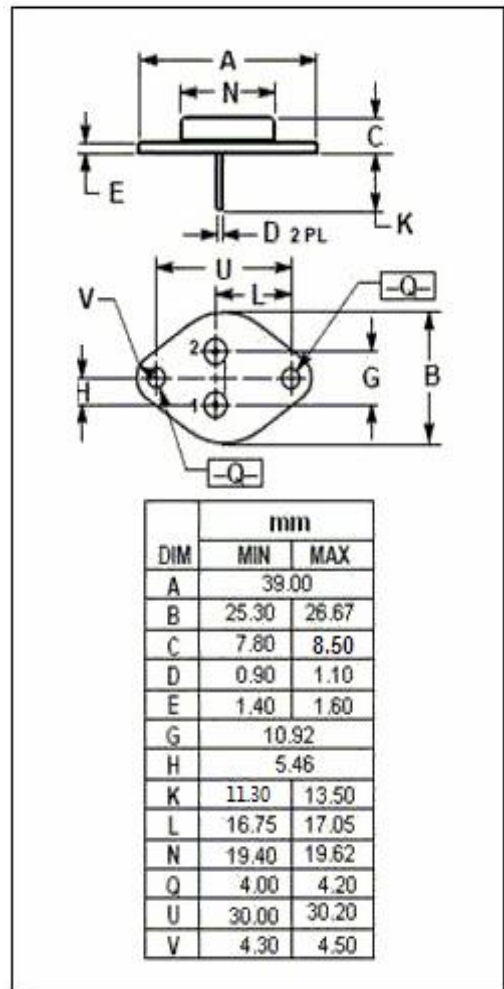
**APPLICATIONS**

- Designed for power switching applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emmitter Voltage	800	V
$V_{EBO}$	Emmitter-Base Voltage	6	V
$I_C$	Collector Current- Continuous	5	A
$I_{CP}$	Collector Current-Peak	7	A
$P_C$	Collector Power Dissipation @ $T_c T_c=25^\circ C$	50	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-45~150	$^\circ C$



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## 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> = 10mA; R <sub>BE</sub> = ∞	800			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> = 4A; I <sub>B</sub> = 0.8A			5.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.8A			1.5	V
I <sub>CES</sub>	Collector Cutoff Current	V <sub>CE</sub> = 1500V; R <sub>BE</sub> = 0			0.5	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.3A; V <sub>CE</sub> = 5V	10		30	
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 4A, I <sub>B1</sub> = 0.8A, I <sub>B2</sub> = 2A			1.0	μs
t <sub>stg</sub>	Storage Time			1.0		μs

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