

isc Silicon NPN Power Transistor

2SC3991

DESCRIPTION

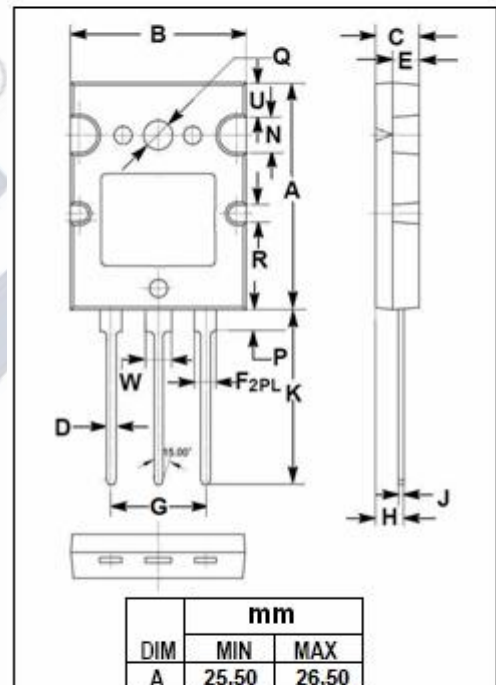
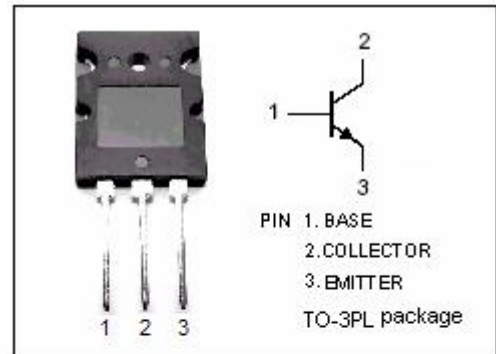
- High Switching Speed
- High Breakdown Voltage-
: $V_{(BR)CBO} = 800\text{ V (Min)}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	7	V
I_c	Collector Current-Continuous	50	A
P_c	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	300	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25

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ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	450			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=24\text{A}; I_B=4.8\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=24\text{A}; I_B=4.8\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=500\text{V}; I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=4.8\text{A}; V_{CE}=5\text{V}$	15		50	
h_{FE-2}	DC Current Gain	$I_C=24\text{A}; V_{CE}=5\text{V}$	8			