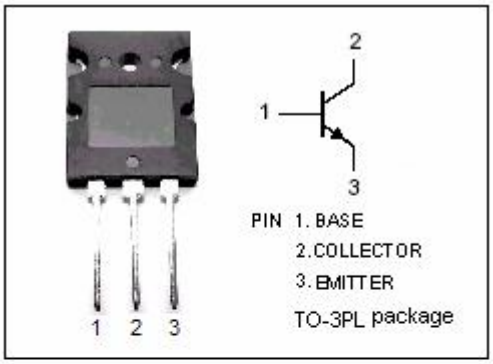
isc Silicon NPN Power Transistor 2SC3989

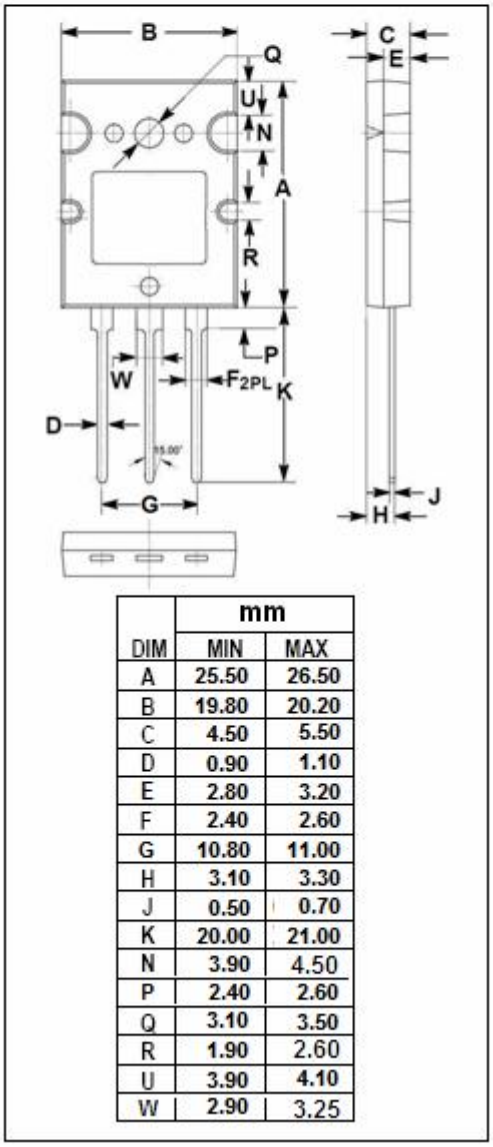


DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 500V(Min)
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator and general purpose applications.



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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	25	A
I_{CM}	Collector Current-Peak	40	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation @ T_C=25℃	200	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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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= 5mA ; I_B= 0	500			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	800			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1m A; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 12A; I_B= 2.4A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 12A; I_B= 2.4A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V ; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 2.4A ; V_{CE}= 5V	15		50	
h_{FE-2}	DC Current Gain	I_C= 12A ; V_{CE}= 5V	8			
f_T	Current-Gain—Bandwidth Product	I_C= 2.4A ; V_{CE}= 10V		18		MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V		260		pF

◆ **h_{FE-1} Classifications**

L	M	N
15-30	20-40	30-50

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