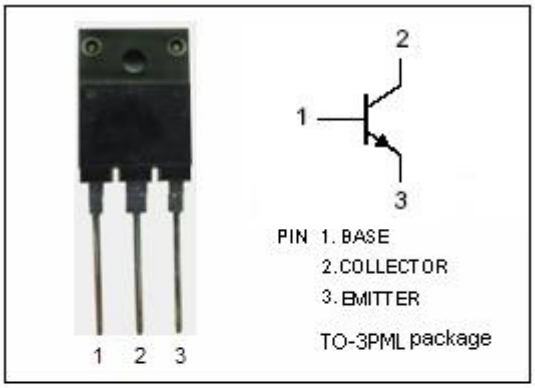
isc Silicon NPN Power Transistor — 2SC4461



DESCRIPTION

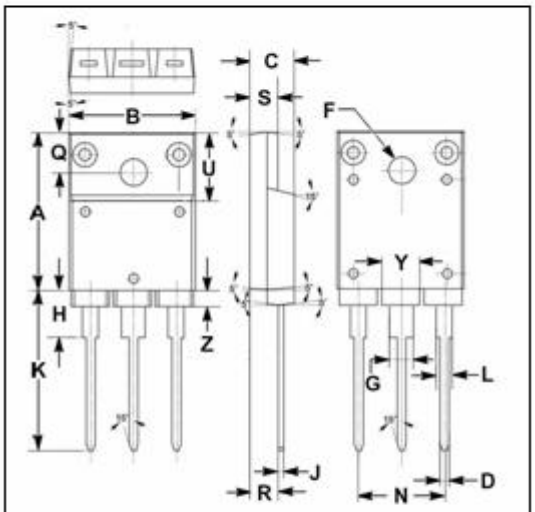
- High Breakdown Voltage-
  : $V_{(BR)CEO}$= 500V(Min)
- Fast Switching speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator applications

ABSOLUTE MAXIMUM RATINGS(Ta=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_{CP}	Collector Current-Pulse	40	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation @ T_C=25℃	65	W
	Collector Power Dissipation @ T_a=25℃	3	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

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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; R_{BE}= ∞	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= 1mA; 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			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		260		pF
f_T	Current-Gain—Bandwidth Product	I_C= 2.4A ; V_{CE}= 10V		18		MHz

◆ **h_{FE-1} Classifications**

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

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