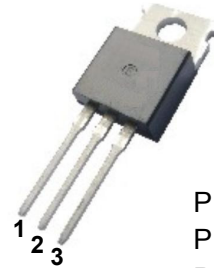


Silicon NPN Power Transistors

DESCRIPTION

- Low Collector-Emitter Saturation Voltage
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 8A$
- Fast Switching Speeds
- Complement to Type SL45H11
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



PIN1 : Base
PIN 2 : Collector
PIN 3 : Emitter

APPLICATIONS

- Designed for general purpose power amplification and switching such as output or driver stages in applications such as switching regulators, converters and power amplifier.

TO-220-3L

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

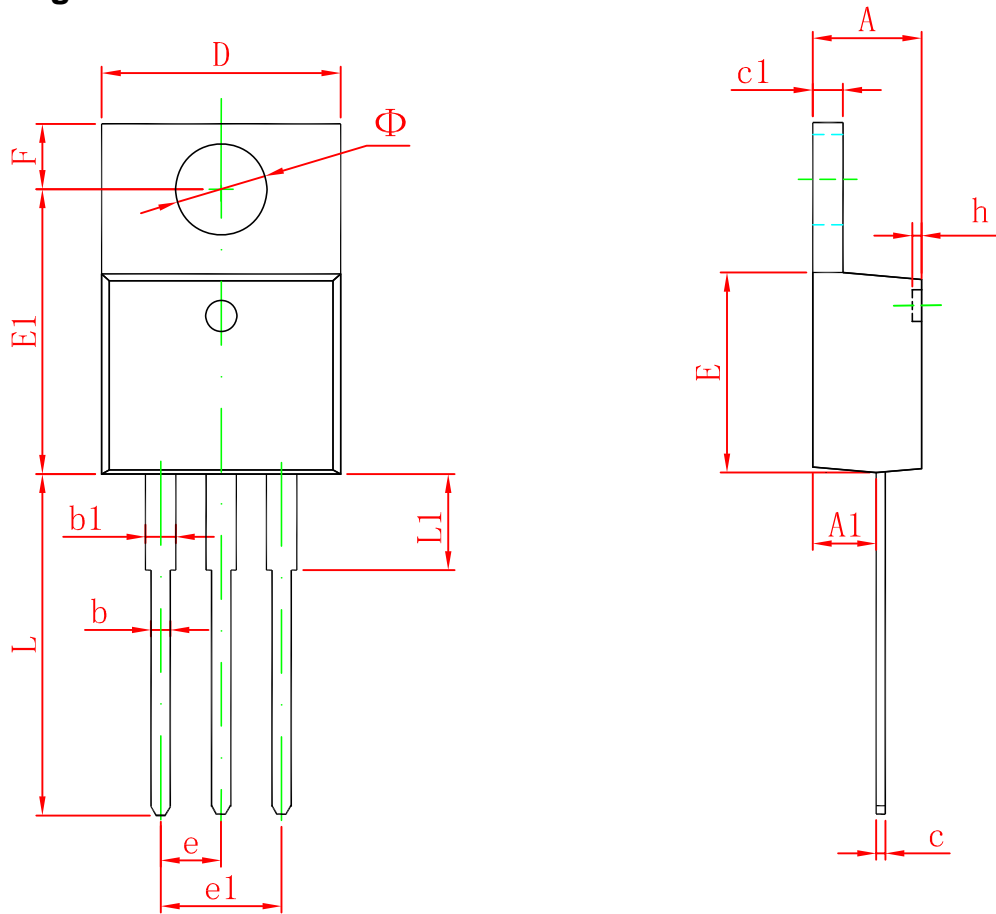
SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	50	W
T_j	Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	75	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS
 $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 8A ; I_B= 0.4 A$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 8A ; I_B= 0.8 A$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}=\text{Rated } V_{CEO}; V_{BE}= 0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5V; I_C= 0$			100	μA
h_{FE-1}	DC Current Gain	$I_C= 2A ; V_{CE}= 1V$	60			
h_{FE-2}	DC Current Gain	$I_C= 4A ; V_{CE}= 1V$	40			
C_{OB}	Output Capacitance	$V_{CB}= 10V, f= 1.0\text{MHz}$		130		pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.5A; V_{CE}= 10V; f_{test}=20\text{MHz}$		50		MHz

TO-220-3L Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
Φ	3.735	3.935	0.147	0.155