

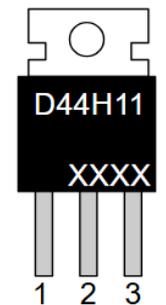
## Silicon NPN Power Transistors

### 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

### 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.



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TO-220-3L

PIN1 : Base  
PIN 2 : Collector  
PIN 3 : Emitter

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

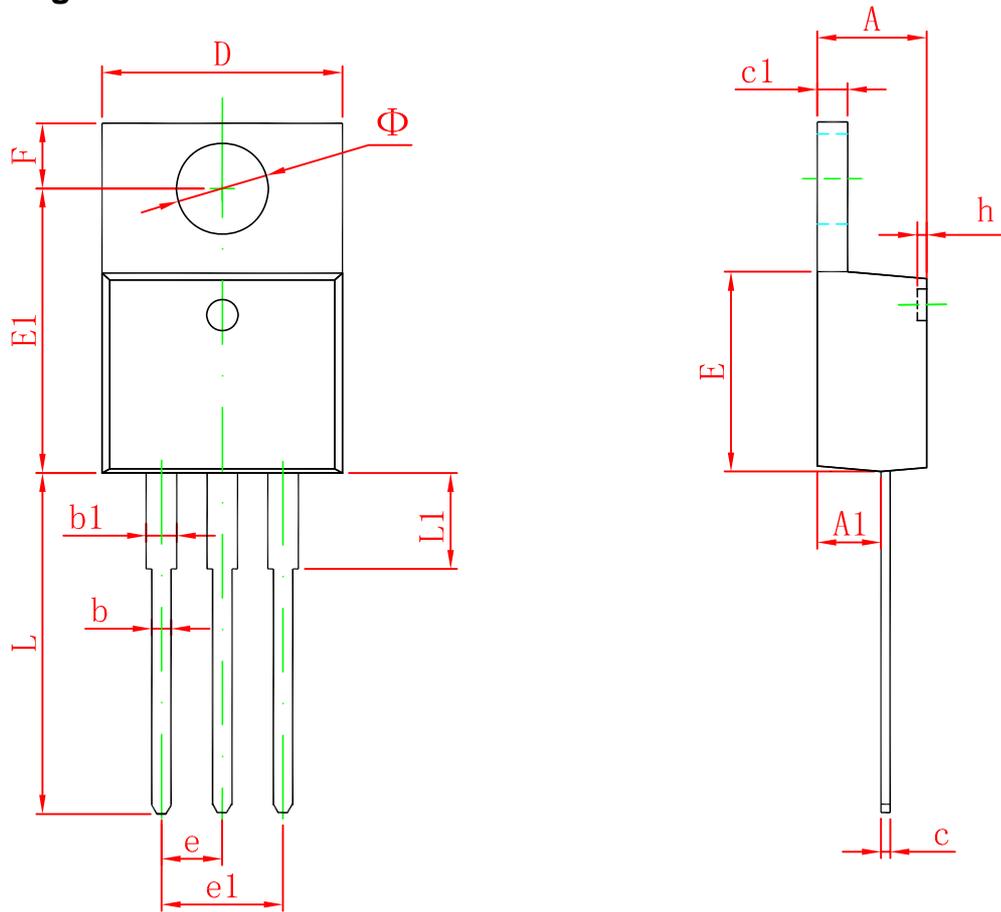
SYMBOL	PARAMETER	VALUE	UNIT
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	10	A
$I_{CM}$	Collector Current-Peak	20	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	50	W
$T_j$	Junction Temperature	-55~150	$^\circ\text{C}$
$T_{stg}$	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	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	75	$^\circ\text{C/W}$

**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	$I_C= 8\text{ A}; I_B= 0.4\text{ A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 8\text{ A}; I_B= 0.8\text{ A}$			1.5	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}=\text{Rated } V_{CEO}; V_{BE}= 0$			10	$\mu\text{ A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 5\text{ V}; I_C= 0$			100	$\mu\text{ A}$
$h_{FE-1}$	DC Current Gain	$I_C= 2\text{ A}; V_{CE}= 1\text{ V}$	60			
$h_{FE-2}$	DC Current Gain	$I_C= 4\text{ A}; V_{CE}= 1\text{ V}$	40			
$C_{OB}$	Output Capacitance	$V_{CB}= 10\text{ V}, f= 1.0\text{ MHz}$		130		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.5\text{ A}; V_{CE}= 10\text{ V}; f_{test}=20\text{ MHz}$		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
$\Phi$	3.735	3.935	0.147	0.155