

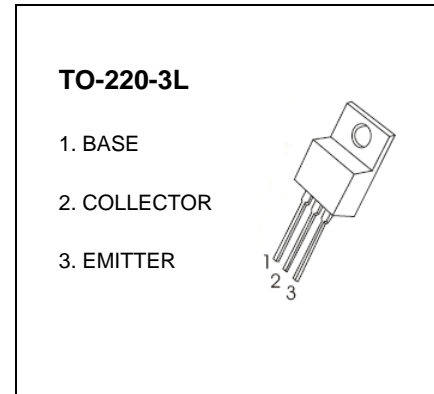


TO-220-3L Plastic-Encapsulate Transistors

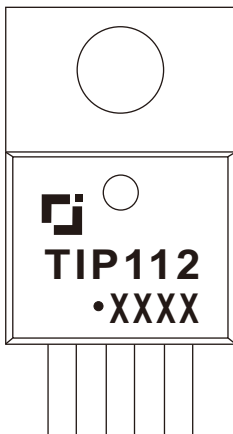
**TIP112** DARLINGTON TRANSISTOR (NPN)

**FEATURES**

- High DC Current Gain :  $h_{FE}=1000$  @  $V_{CE}=4V$ ,  $I_C=1A$ (Min.)
- Low Collector-Emitter Saturation Voltage
- Industrial Use

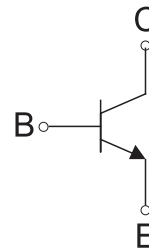


**MARKING**



TIP112=Device code  
 Solid dot=Green moldinn compound device,  
 if none,the normal device  
 XXXX=Code

**Equivalent Circuit**



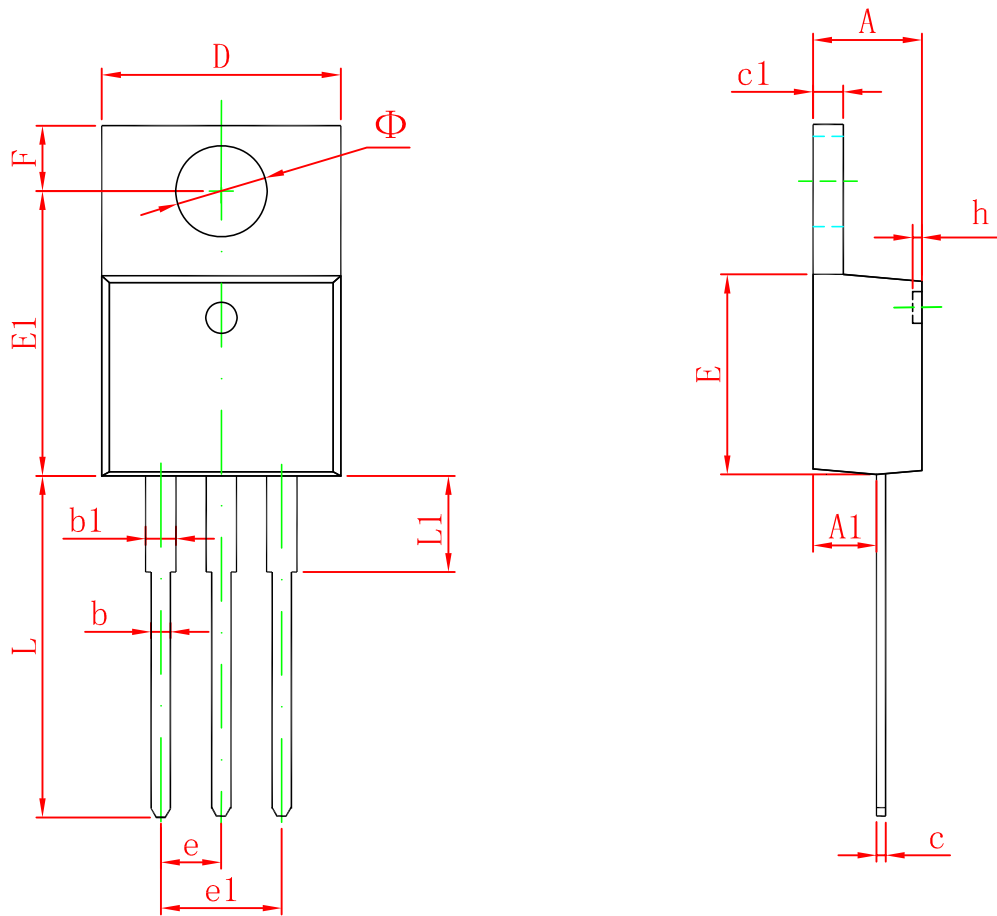
**MAXIMUM RATINGS** ( $T_a=25^{\circ}C$  unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	100	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	2	A
$P_C$	Collector Power Dissipation	2	W
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55 to +150	$^{\circ}C$

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10mA, I <sub>E</sub> =0	100			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =30mA, I <sub>B</sub> =0 <sup>(SUS)</sup>	100			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10mA, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =50V, I <sub>B</sub> =0			2	mA
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0			1	mA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			2	mA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =1A	1000		12000	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =2A	500			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =8mA			2.5	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =4V, I <sub>C</sub> =2A			2.8	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz			100	pF

# 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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Darlington Transistors](#) category:*

*Click to view products by [Changjing Electronics Technology](#) manufacturer:*

Other Similar products are found below :

[NJVMJD128T4G](#) [281287X](#) [BDV64B](#) [SBSP52T1G](#) [LB1205-L-E](#) [2N6053](#) [MPSA63](#) [2N6667](#) [NTE256](#) [TIP120](#) [MJ11028](#) [TIP140](#) [TIP127L-](#)  
[BP](#) [2N6383](#) [ULN2803](#) [ULN2803](#) [2N6036](#) [2N6039](#) [2SB1560](#) [2SB852KT146B](#) [2SD2560](#) [TIP112TU](#) [BCV27](#) [MMBTA13-TP](#) [MMBTA14-](#)  
[TP](#) [MMSTA28T146](#) [NTE2557](#) [NJVNJD35N04T4G](#) [CP527-2N6299-CT5](#) [CP127-2N6301-CT5](#) [MPSA29-D26Z](#) [FJB102TM](#) [FMMT38C](#)  
[BCV29](#) [BCV47](#) [FMMT734](#) [BCV46E6327HTSA1](#) [BSP61H6327XTSA1](#) [BU941ZPFI](#) [FZT600](#) [FZT605](#) [2SB1316TL](#) [NTE2350](#) [NTE245](#)  
[NTE2649](#) [NTE46](#) [NTE98](#) [ULN2003ADR2G](#) [NTE2344](#) [NTE2349](#)