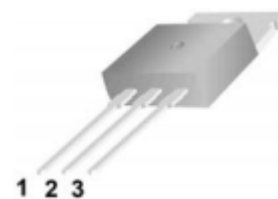


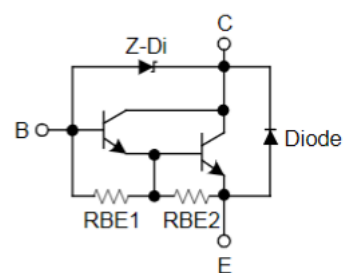
## Silicon NPN Darlington Power Transistor

### DESCRIPTION

- Low Collector Saturation Voltage
- High DC Current Gain
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



TO-220



### APPLICATIONS

- Audio power amplifiers
- Relay & solenoid drivers
- Motor controls
- General purpose power amplifiers
- Including zener diode

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	450	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$V_Z$	Zener Voltage	300	V
$I_C$	Collector Current-Continuous	6	A
$I_B$	Base Current-Continuous	2.5	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	40	W
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-40~150	$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.0	$^{\circ}\text{C}/\text{W}$

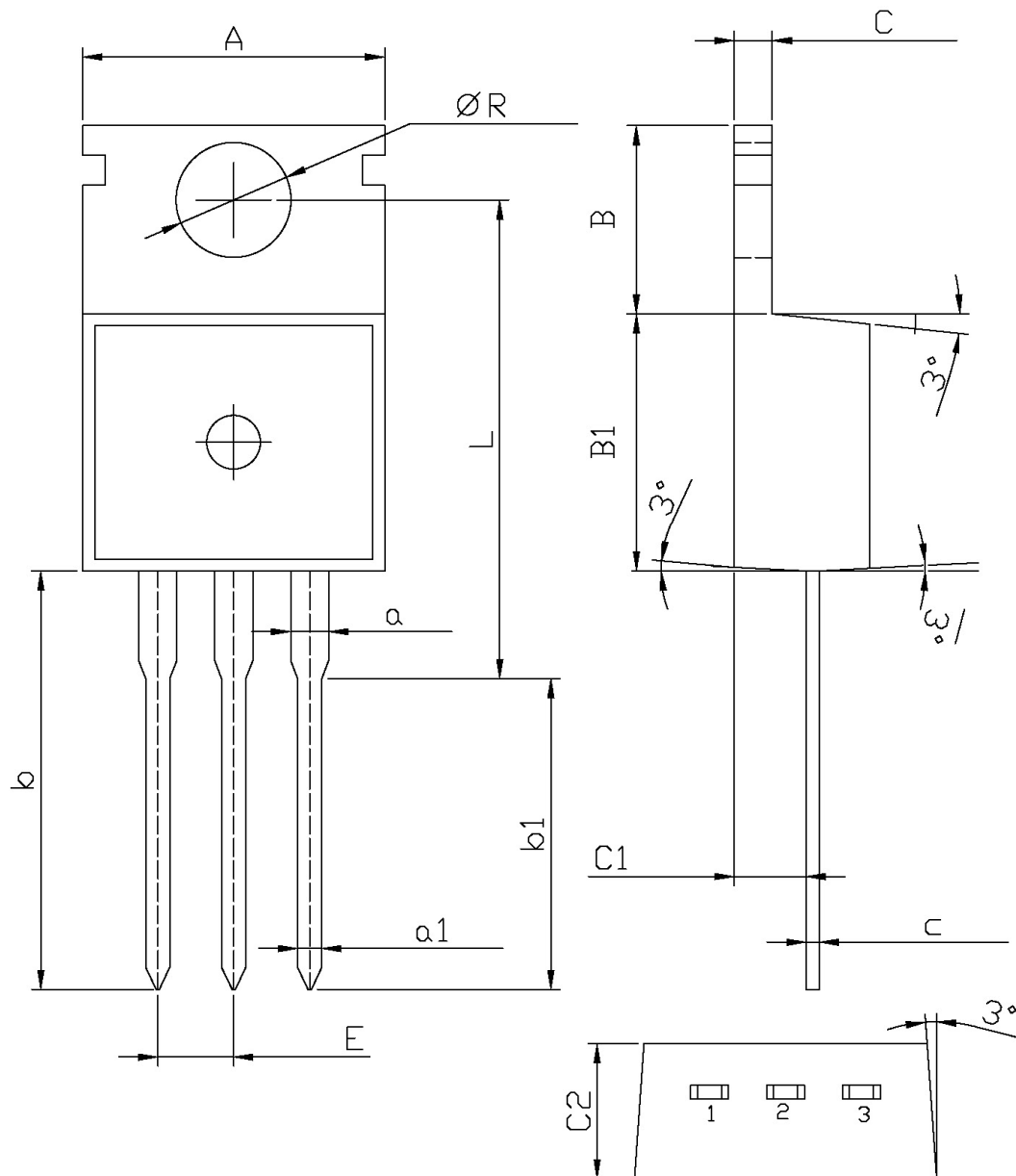
**ELECTRICAL CHARACTERISTICS**

 T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>Z</sub>	Zener Voltage	I <sub>Z</sub> = 0.1mA	300		450	V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 5mA; I <sub>C</sub> = 0	6			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 15mA			1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 15mA			2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 300V; I <sub>E</sub> = 0			0.1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 6V; I <sub>C</sub> =0			5	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 2V	500			

**Package Dimensions**

TO-220



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
L	15.7	16.1	B1	9.0	9.4
b	12.6	13.6	C1	2.2	2.6
b1	9.6	10.6	a1	0.7	0.9
a	1.22	1.32	c	0.4	0.6
E	2.34	2.74	C2	4.3	4.7

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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

*Click to view products by [SLKORMICRO](#) manufacturer:*

Other Similar products are found below :

[BDV64B](#) [2N6298](#) [NJVMJD117T4G](#) [2N6053](#) [MPSA63](#) [NTE256](#) [TIP120](#) [MJ11028](#) [TIP127](#) [Jantx2N6352](#) [2N6301](#) [NJVBUB323ZT4G](#)  
[ULN2803QN](#) [KID65004AF-EL/P](#) [ULN2803CDWR](#) [MJ11033G-JSM](#) [MMBTA64](#) [TPM2003-SO3R](#) [KSP13](#) [MC1413BN](#) [TIP127](#) [TIP122](#)  
[TIP122F](#) [TIP122-JSM](#) [ULN2003A-JSM](#) [MJ11032G-JSM](#) [KID65783BF-EL/P](#) [ULN2001D\(MS\)](#) [2SD1071](#) [MJ11028](#) [MJ11030](#) [MJ1000](#)  
[MJ11031](#) [TIP160](#) [2N6287](#) [MJ11029](#) [MJ3001](#) [MJ2501](#) [ULN2001D\(UMW\)](#) [ULN2003APWR\(UMW\)](#) [ULN2003AIPWR\(UMW\)](#)  
[ULN2002D\(UMW\)](#) [ULN2803G-P20-R](#) [WD2002](#) [AIP2003LSA16.TB](#) [AIP2803SA.TR](#) [AIP2803](#) [AIP2803LSA18.TB](#) [XL2803CD](#)  
[ULN2004MT/TR](#)