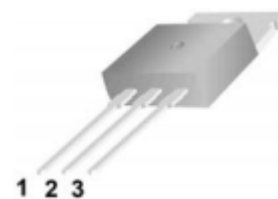


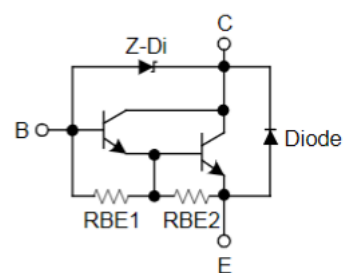
Silicon NPN Darlington Power Transistor

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	$^{\circ}\text{C}/\text{W}$

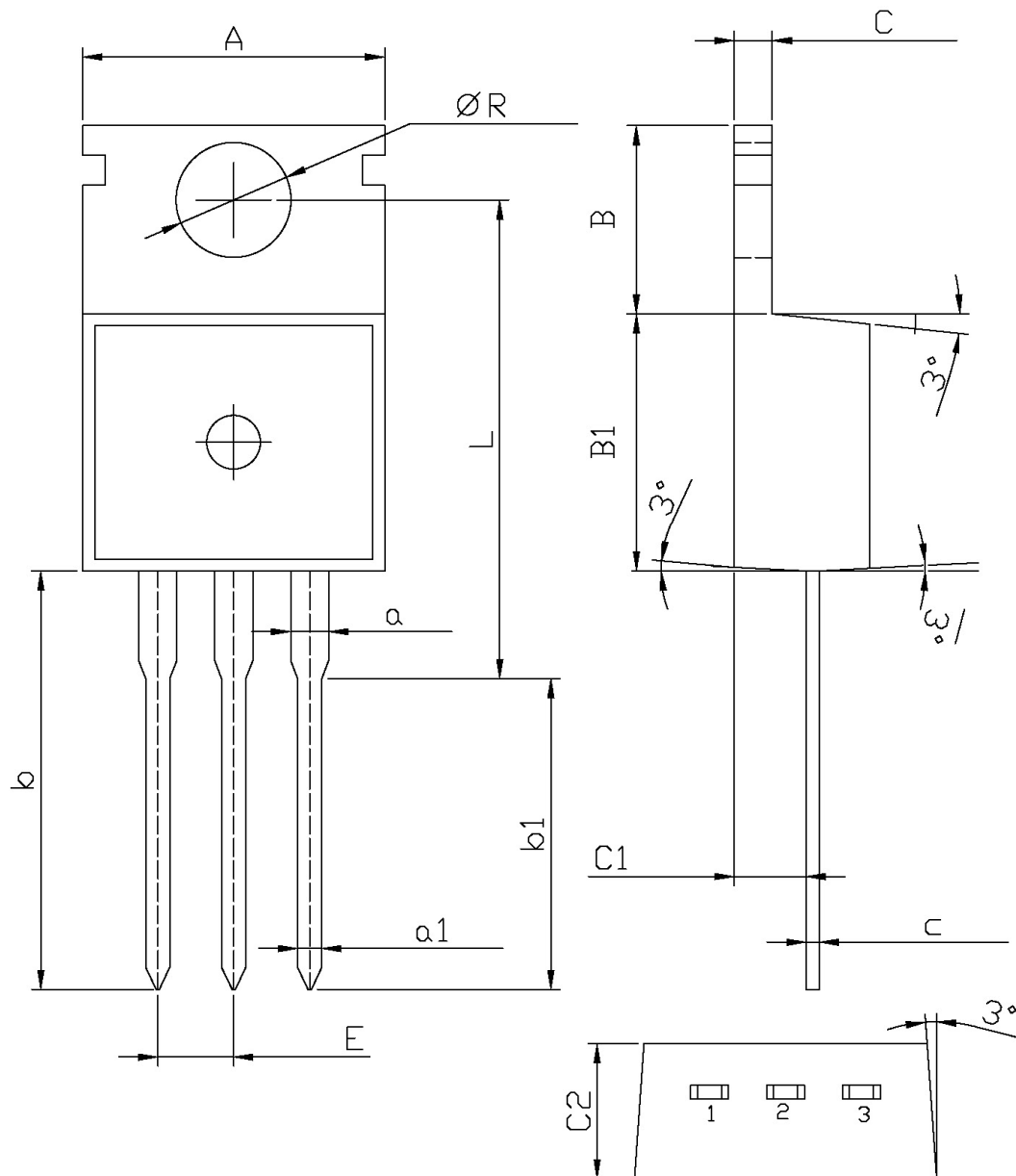
ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _Z	Zener Voltage	I _Z = 0.1mA	300		450	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 5mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 15mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 15mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 300V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C =0			5	mA
h _{FE}	DC Current Gain	I _C = 4A; V _{CE} = 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