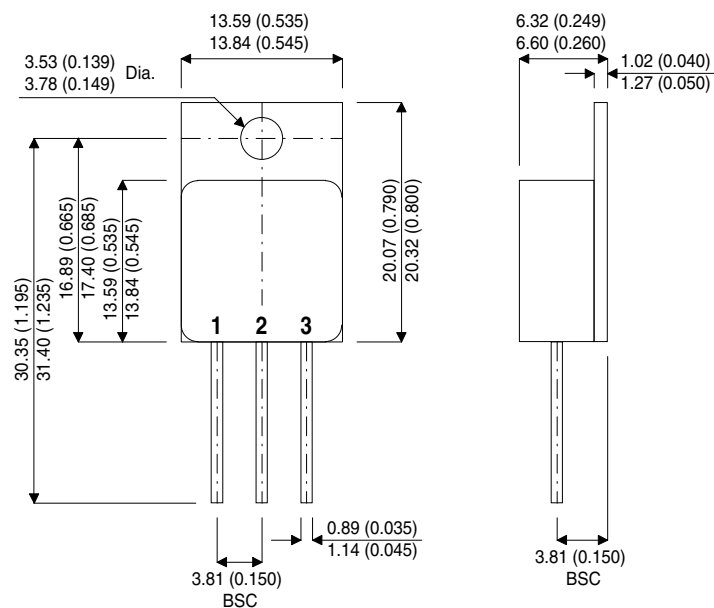


MECHANICAL DATA

Dimensions in mm



TO254 METAL PACKAGE

Pin 1 – Base Pin 2 – Collector Pin 3 – Emitter

**COMPLEMENTARY
POWER DARLINGTON
TO254 METAL TRANSISTORS**

FEATURES

- HERMETIC TO254 METAL PACKAGE
- HIGH RELIABILITY
- ISOLATED OPTION
- MILITARY OPTION
- SCREENING OPTIONS AVAILABLE

APPLICATIONS

- COMPLEMENTARY GENERAL PURPOSE
AMPLIFIER APPLICATIONS

ABSOLUTE MAXIMUM RATINGS ($T_{case} = -25^{\circ}C$ unless otherwise stated)		BDS29A	BDS29B	BDS29C
V_{CBO}	Collector - Base voltage ($I_E = 0$)	60V	90V	120V
V_{CEO}	Collector - Emitter voltage ($I_B = 0$)	60V	90V	120V
V_{EBO}	Emitter - Base voltage ($I_C = 0$)		5V	
I_E, I_C	Emitter, Collector current		30A	
I_B	Base current		1A	
P_{tot}	Total power dissipation at $T_{case} \leq 75^{\circ}C$		150W	
T_{stg}	Storage Temperature		- 65 TO 200°C	
T_j	Junction Temperature		200°C	
$R_{THj-case}$	Thermal resistance junction - case		1.16°C/W	

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit	
BV_{CEO}	Collector Emitter Breakdown Voltage	$I_C = 100mA$ $I_B = 0$	BDS29A			60	V	
			BDS29B			90		
			BDS29C			120		
I_{CER}	Collector Emitter Leakage Current	$V_{CE} = 60V$ $T_C = 150^{\circ}C$	$R_{BE} = 1K\Omega$ BDS29A			1	mA	
			$R_{BE} = 1K\Omega$ BDS29B			5		
			$V_{CE} = 90V$ $T_C = 150^{\circ}C$	$R_{BE} = 1K\Omega$ BDS29B				1
			$V_{CE} = 120V$ $T_C = 150^{\circ}C$	$R_{BE} = 1K\Omega$ BDS29C				5
I_{EBO}	Emitter cut-off current	$V_{BE} = 5V$	$I_C = 0$			5	mA	
I_{CEO}	Collector - Emitter Leakage Current	$I_B = 0$	$V_{CE} = 50V$			1	mA	
$V_{CE(sat)*}$	Collector - Emitter Saturation Voltage	$I_C = 20A$ $I_C = 30A$	$I_B = 0.2A$			3	V	
			$I_B = 0.3A$			4		
$V_{BE(sat)*}$	Base - Emitter Saturation Voltage	$I_C = 20A$ $I_C = 30A$	$I_B = 0.2A$			3.5	V	
			$I_B = 0.3A$			5		
h_{FE*}	DC Current gain	$I_C = 20A$ $I_C = 30A$	$V_{CE} = 5V$	1000			—	
			$V_{CE} = 5V$	200				
h_{fe*}	Small Signal Forward Current Transfer Ratio	$I_C = 1A$	$V_{CE} = 3V$ $f = 1MHz$	4			MHz	

*Pulsed : $t_p = 300 \mu s$, $\delta \leq 2 \%$