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T-33-29

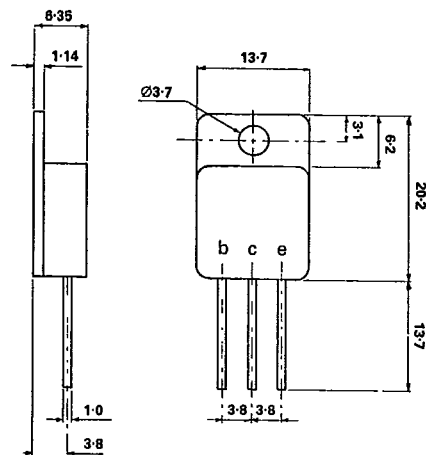
T-33-31

NEW PRODUCT**BDS 28A,B,C****BDS 29A,B,C**

**COMPLEMENTARY
POWER DARLINGTON
SOT 93 METAL TRANSISTORS**

MECHANICAL FEATURES

Dimensions in mm

**FEATURES**

- HERMETIC SOT 93 METAL PACKAGE
- HIGH RELIABILITY
- ISOLATED OPTION
- MILITARY OPTION
- SCREENING OPTIONS AVAILABLE

APPLICATIONS

- COMPLEMENTARY GENERAL PURPOSE AMPLIFIER APPLICATIONS

SOT 93M Metal case. Collector connected to case.
SOT 93M-ISO Metal case. All leads isolated from case.

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)		PNP NPN	BDS 28A BDS 29A	BDS 28B BDS 29B	BDS 28C BDS 29C
V_{CEO}	Collector-emitter voltage		60V	90V	120V
V_{CBO}	Collector-base voltage		60V	90V	120V
V_{EB}	Emitter-base voltage ($I_c = 0$)			5V	
I_c	Collector current			30A	
I_B	Base current			1A	
P_{tot}	Total power dissipation at $T_{CASE} \leq 25^\circ\text{C}$			150W	
T_{stg}	Storage temperature			-65 to 200°C	
T_j	Junction temperature			200°C	
R_{th}	Thermal resistance (junction-case)			1.16°C/W	

SEMELAB LTD., TELEPHONE (0

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Editor SA

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{CEO} Collector-emitter breakdown voltage BDS 28A BDS 29A BDS 28B BDS 29B BDS 28C BDS 29C	$I_B = 0$ $I_C = 100\text{mA}$	60 90 120			V V V
I_{CER} Collector-emitter leakage current BDS 28A BDS 29A BDS 28B BDS 29B BDS 28C BDS 29C	$V_{CE} = 60\text{V}$ $R_{BE} = 1\text{K}\Omega$ $T_c = 150^{\circ}\text{C}$ $V_{CE} = 90\text{V}$ $R_{BE} = 1\text{K}\Omega$ $T_c = 150^{\circ}\text{C}$ $V_{CE} = 120\text{V}$ $R_{BE} = 1\text{K}\Omega$ $T_c = 150^{\circ}\text{C}$		1.0 5.0 1.0 5.0 1.0 5.0		mA mA mA mA mA mA
I_{EBO} Emitter cut-off current	$I_C = 0$ $V_{BE} = 5\text{V}$			5.0	mA
I_{CEO} Collector-emitter leakage current	$I_B = 0$ $V_{CE} = 50\text{V}$			1.0	mA
$V_{CE(sat)}$ Collector-emitter saturation voltage	$I_C = 20\text{A}$ $I_B = 0.2\text{A}$ $I_C = 30\text{A}$ $I_B = 0.3\text{A}$			3.0 4.0	V V
$V_{BE(sat)}$ Emitter-base saturation voltage	$I_C = 20\text{A}$ $I_B = 0.2\text{A}$ $I_C = 30\text{A}$ $I_B = 0.3\text{A}$			3.5 5.0	V V
h_{FE} DC Current gain	$I_C = 20\text{A}$ $V_{CE} = 5\text{V}$ $I_C = 30\text{A}$ $V_{CE} = 5\text{V}$	1000 200			— —
h_{fo} Small signal forward current transfer ratio	$I_C = 1\text{A}$ $V_{CE} = 3\text{V}$ $f = 1\text{MHz}$	4.0			MHz

* Pulse test $t_p = 300\mu\text{s}$ $\delta \leq 2\%$