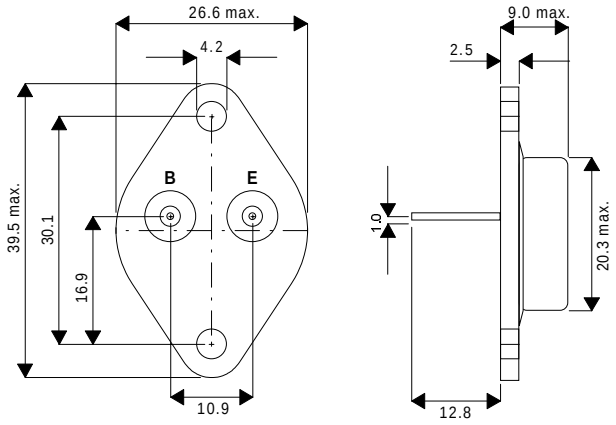
PMD18K100

MECHANICAL DATA
Dimensions in mm



TO3 Package.
Case is collector.

NPN DARLINGTON POWER TRANSISTOR

FEATURES
- **TO3 PACKAGE**
- **100V**
- **60A PEAK**
- **240 WATTS**

DESCRIPTION
The PMD18K100 is an NPN Darlington Power Transistor in a hermetic TO3 package. The device is a monolothic epitaxial structure with built in base-emitter shunt resistor

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage (Open Emitter)	100V
V_{CEO}	Collector – Emitter Voltage (Open Base)	100V
V_{EBO}	Emitter – Base Voltage (Open Collector)	5V
I_C	Collector Current Continuous	30A
	Peak	60A
I_B	Base Current	0.75A
P_D	Total Power Dissipation at T_{case}= 50°C	240W
T_J, T_{STG}	Operating Junction and Storage Temperature	-65 to +200°C
θ_{JC}	Thermal Resistance	0.625°C/W

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

Prelim. 10/99

SEME LAB

PMD18K100

ELECTRICAL CHARACTERISTICS (T_J = 0 to 200°C, unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Units
	ON CHARACTERISTICS						
$V_{CE(sat)}$	Collector - Emitter Saturation Voltage*	I_C = 15A	I_B = 60mA			2	V
$V_{BE(on)}$	Base - Emitter Turn-on Voltage*	I_C = 15A	V_{CE} = 3V			2.8	V
$V_{BE(sat)}$	Base - Emitter Saturation*	I_C = 15A	I_B = 60mA			2.8	V
h_{FE}	DC Current Gain*	I_C = 15A	V_{CE} = 3V T_j = 25°C	1000		20000	
$I_{s/b}$	Forward Bias Secondary Breakdown Current	V_{CE} = 30V 1 sec non-repetitive pulse	T_A = 25°C	8.0			A
	OFF CHARACTERISTICS						
$V_{(BR)CEO}$	Collector Emitter Breakdown Voltage (Base Open)*	I_{CE} = 100mA	T_j = 25°C	100			V
$V_{(SUS)CER}$	Collector Emitter Sustaining Voltage*	I_{CE} = 100mA	R_{BE} = 2.2KΩ	100			V
I_{EBO}	Emitter Base Leakage Current	V_{EB} = 5V	I_C = 0A			3.0	mA
I_{CER}	Collector Emitter Leakage Current	V_{CE} = 67V	R_{BE} = 2.2KΩ			10.0	mA
	DYNAMIC CHARACTERISTICS						
C_{ob}	Output Capacitance	V_{CB} = 10V f = 1MHz	I_E = 0A T_j = 25°C			600	pF
h_{fe}	Small Signal Current Gain	I_C = 9A f = 1KHz	V_{CE} = 3V T_j = 25°C	300			
h_{fe}	Common Emitter Short Circuit Forward Transfer Ratio	I_C = 9A f = 1MHz	V_{CE} = 3V T_j = 25°C	4			

* Pulse Tested with pulse width ≤ 300μs, and duty cycle < 2%