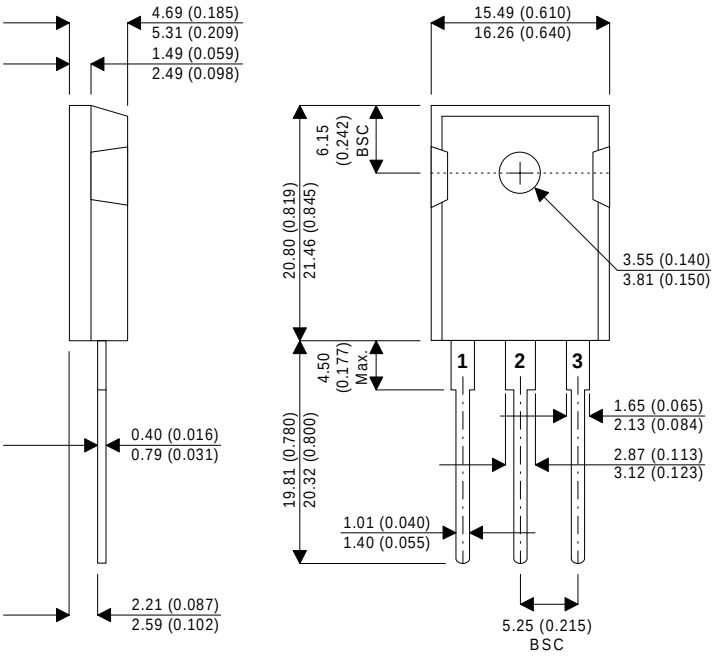
BUP56

MECHANICAL DATA
Dimensions in mm



TO247

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

NPN MULTI-EPITAXIAL TRANSISTOR

FEATURES

- DIFFUSED BY SEMEFAB
- VERY LOW SATURATION VOLTAGES
- VERY FAST SWITCHING (t = 60ns)
- HIGH RELIABILITY

APPLICATIONS

- HIGH FREQUENCY AND HIGH EFFECIENCY CONVERTERS
- SWITCHING REGULATORS
- MOTOR CONTROLS

The BUP56 is a very fast switching, very low saturation, high power tranistor using wafer diffused by Semefab. It is particularly suited to applications requiring efficient, fast switching devices.

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

V_{CEX}	Collector – Emitter Voltage (V_{BE} = –1.5V)	150V
V_{CEO}	Collector – Emitter Voltage (I_B = 0)	60V
V_{EBO}	Emitter – Base Voltage	10V
I_C	Collector Current	30A
$I_{C(PK)}$	Peak Collector Current	40A
P_{tot}	Total Dissipation at T_{case} = 25°C	150W
T_{stg}	Storage Temperature	–55 to 175°C
T_J	Maximum Operating Junction Temperature	175°C
R_{th}	Thermal Resistance (junction-case)	1.0°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

BUP56

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$	Collector Emitter Sustaining Voltage	I_C = 100mA	60			V
I_{CEX}	Collector Cut–Off Current	V_{BE} = -1.5V V_{CEX} = 154			0.1	mA
		T_C = 150°C			5	
I_{EBO}	Emitter Cut–Off Current	V_{BE} = 8V			0.1	mA
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 15A I_B = 1.5A		0.4	0.7	V
		I_C = 30A I_B = 3A		0.7	1.0	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 15A I_B = 1.5A		1.1	1.4	V
		I_C = 30A I_B = 3A		1.4	1.7	
h_{FE}	DC Current Gain	I_C = 15A V_{CE} = 4V	25	30		—
		I_C = 30A V_{CE} = 4V	15	22		
SWITCHING CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)						
t_{on}	On Time	I_C = 20A V_{CC} = 60V		0.2	0.5	µS
t_s	Storage Time	I_{B1} = 2A			0.7	
t_f	Fall Time	I_{B2} =2 A			0.15	

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

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.