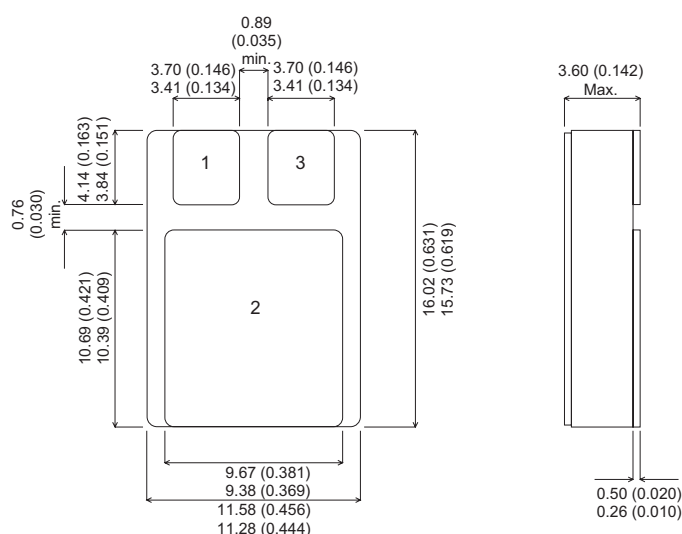


MECHANICAL DATA

Dimensions in mm

MEDIUM POWER PNP SILICON POWER TRANSISTOR



- LOW SATURATION VOLTAGE
- HIGH GAIN

FEATURES

- Hermetically sealed Surface Mount Package.
- Small Footprint - efficient use of PCB space.
- Lightweight
- High Packing Densities

SMD1

Complementary to NPN
2N3766SMD

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

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector – Base Voltage	80V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	80V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	7V
I_C	Collector Current	4A
$I_{C(PK)}$	Peak Collector Current	10A
I_B	Base Current	2A
P_{tot}	Total Dissipation at $T_{case} = 25^{\circ}C$	50W
T_{stg}	Operating and Storage Temperature Range	-65 to 200°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
ELECTRICAL CHARACTERISTICS							
V _{CEO(sus)*}	Collector – Emitter Sustaining Voltage	I _C = 100mA	I _B = 0	80			V
I _{CBO}	Collector Base Cut–Off Current	V _{CB} = 80V	I _E = 0			100	μA
I _{CEO}	Collector Emiiter Cut–Off Current	V _{CE} = 60V	I _B = 0			1.0	mA
I _{CEX}	Collector Cut–Off Current	V _{CE} = 80V	V _{BE(OFF)} = 1.5V			100	μA
		V _{CE} = 60V	V _{BE(OFF)} = 1.5V			1	mA
		T _C = 150°C					
I _{EBO}	Emitter Base Cut–Off Current	V _{EB} = 7V				0.5	mA
h _{FE} *	DC Current Gain	I _C = 100mA	V _{CE} = 1V	40			—
		I _C = 250mA	V _{CE} = 1V	30		100	
		I _C = 500mA	V _{CE} = 1V	20			
		I _C = 1A	V _{CE} = 1V	10			
V _{CE(sat)*}	Collector – Emitter Saturation Voltage	I _C = 1A	I _B = 125mA			0.6	V
V _{BE} *	Base – Emitter Saturation Voltage	I _C = 250mA	I _B = 1V			1.0	
DYNAMIC CHARACTERISTICS							
f _t	Transition Frequency	I _C = 100mA	V _{CE} = 10V f = 1MHz	3 4			MHz
C _{ob}	Output Capacitance	V _{CB} = 10V	I _C = 0 f = 100KHz			100	pF
h _{fe}	Small Signal Current Gain	I _C = 50mA	V _{CE} = 10V f = 1KHz	25			—

* Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $< 2\%$