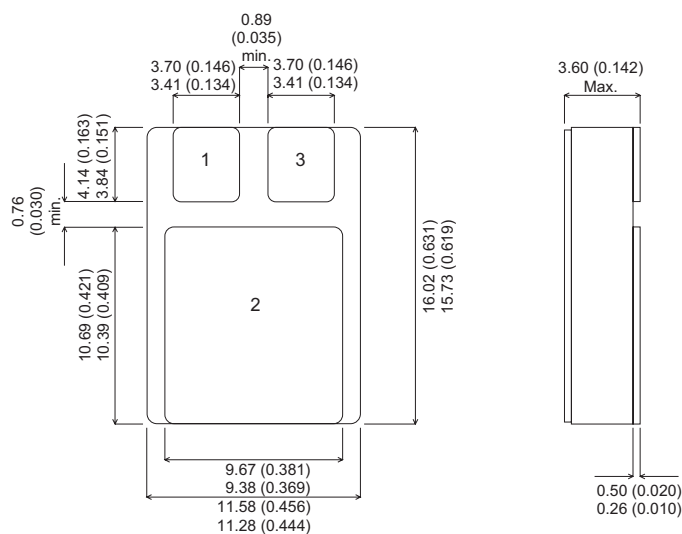


**MECHANICAL DATA**

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
<b>ELECTRICAL CHARACTERISTICS</b>					
$V_{CEO(sus)*}$	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	$\mu A$
$I_{CEO}$	Collector Emitter 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	$\mu A$
		$V_{CE} = 60V$ $V_{BE(OFF)} = 1.5V$ $T_C = 150^{\circ}C$		1	mA
$I_{EBO}$	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	
<b>DYNAMIC CHARACTERISTICS</b>					
$f_t$	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  $\leq 300\mu s$  , Duty Cycle  $< 2\%$