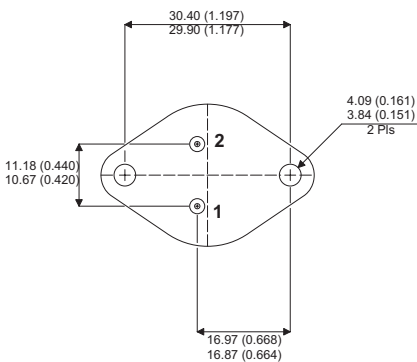
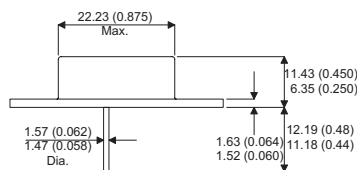
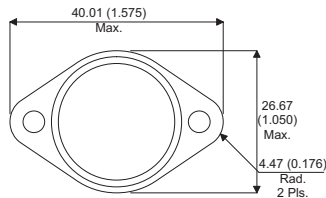


**MECHANICAL DATA**

Dimensions in mm (inches)

**HIGH VOLTAGE NPN  
POWER TRANSISTOR**



**TO-3 (TO-204AA)**

**Underside View**

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

**FEATURES**

- SILICON PLANAR EPITAXIAL PNP TRANSISTOR
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS

**APPLICATIONS:**

The 2N6678 is intended for use in switching regulators and inverter circuits.

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

$V_{CEX}$	Collector - Emitter Voltage	350V
$V_{CEO}$	Collector - Emitter Voltage ( $I_B = 0$ )	300V
$V_{EBO}$	Collector - Emitter Voltage ( $I_C = 0$ )	8V
$I_C$	Collector Current	15A
$I_{CM}$	Collector Peak Current	20A
$I_B$	Base Current	5A
$P_{TOT}$	Total Power Dissipation @ $T_{case} < 25^{\circ}C$	175W
$T_j, T_{stg}$	Maximum Junction And Storage Temperature	-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	
$I_{\text{EBO}}$	Emitter Cut-off Current	$I_{\text{C}}=0$	$V_{\text{EB}}=8\text{V}$			2	mA	
$I_{\text{CEV}}$	Collector Cut-off Current ( $V_{\text{BE}}=-1.5\text{V}$ )	$V_{\text{CE}}=450\text{V}$				0.1		
		$V_{\text{CE}}=450\text{V}$	$T_{\text{C}}=100^{\circ}\text{C}$			1		
$V_{\text{CEO(sus)*}}$	Collector-Emitter Sustaining Voltage	$I_{\text{C}}=0.2\text{A}$	$L_{\text{C}}=25\text{mH}$	400			V	
$h_{\text{FE}}^*$	DC Current Gain	$I_{\text{C}}=15\text{A}$	$V_{\text{CE}}=3\text{V}$	8			—	
$V_{\text{CE(sat)*}}$	Collector-Emitter Saturation Voltage	$I_{\text{C}}=15\text{A}$	$I_{\text{B}}=3\text{A}$			1	V	
			$T_{\text{C}}=100^{\circ}\text{C}$			2		
$V_{\text{BE(sat)*}}$	Base-Emitter Saturation Voltage	$I_{\text{C}}=15\text{A}$	$I_{\text{B}}=3\text{A}$			1.5		
$t_{\text{r}}$	Rise Time	$V_{\text{CC}}=200\text{V}$	$I_{\text{C}}=15\text{A}$			0.6	$\mu\text{s}$	
$t_{\text{s}}$	Storage Time			$I_{\text{B1}}=-I_{\text{B2}}=3\text{A}$				2.5
$t_{\text{f}}$	Fall Time			$V_{\text{BB}}=-6\text{V}$				0.5
$R_{\theta\text{JC}}$	Thermal Resistance Junction - Case					1.0	$^{\circ}\text{C/W}$	

\* Pulsed: Pulse Duration = 300 $\mu\text{s}$ , duty cycle = 2%