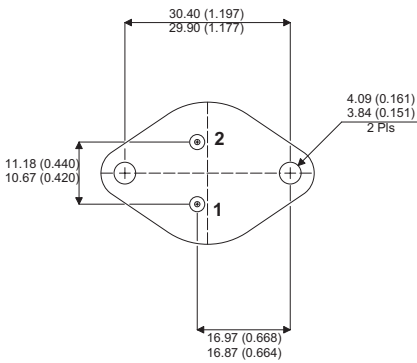
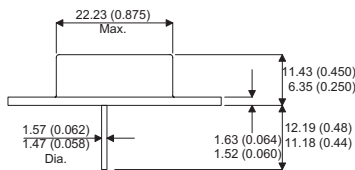
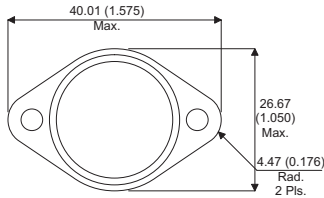


MECHANICAL DATA

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_{EBO}	Emitter Cut-off Current	$I_{\text{C}}=0$	$V_{\text{EB}}=8\text{V}$			2	mA
I_{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_{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_{r}	Rise Time	$V_{\text{CC}}=200\text{V}$	$I_{\text{C}}=15\text{A}$			0.6	μs
t_{s}	Storage Time	$I_{\text{B1}} = -I_{\text{B2}} = 3\text{A}$				2.5	
t_{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 μs , duty cycle = 2%