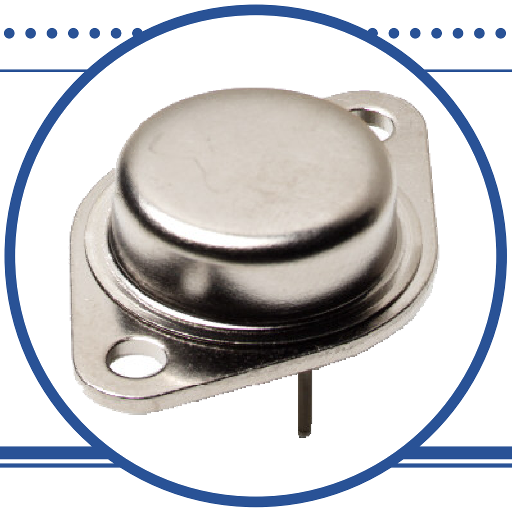
SILICON POWER NPN TRANSISTOR

TT electronics
Semelab Limited

2N6673

- High Voltage
- Hermetic Low Profile TO3 Metal Package.
- Designed For Power Switching and Linear Applications
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage		650V
V_{CEX}	Collector – Emitter Voltage		650V
V_{CEO}	Collector – Emitter Voltage		400V
V_{EBO}	Emitter – Base Voltage		8V
I_C	Continuous Collector Current		8A
I_B	Base Current		4A
P_D	Total Power Dissipation at	T_A = 25°C	6W
		Derate Above 25°C	0.0343 W/°C
P_D	Total Power Dissipation at	T_C = 25°C	150W
		Derate Above 25°C	0.857 W/°C
T_J	Junction Temperature Range		-65 to +150°C
T_{stg}	Storage Temperature Range		-65 to +150°C

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JC}$	Thermal Resistance, Junction To Case	1.17	°C/W

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions		Min.	Typ	Max.	Units
$V_{(BR)CEO}$(1)	Collector-Emitter Breakdown Voltage	I_C = 200mA		400			V
I_{CEX}	Collector-Emitter Cut-Off Current	V_{CE} = 650V	V_{BE} = -1.5V			0.1	mA
			T_A = 125°C			1.0	
I_{CBO}	Collector Cut-Off Current	V_{CB} = 650V	I_E = 0			1.0	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -8V	I_C = 0			2	
h_{FE}(1)	Forward-current transfer ratio	I_C = 1.0A	V_{CE} =3V	10		80	-
		I_C = 5A	V_{CE} = 3V	10		40	
			T_A = -55°C	4			
$V_{CE(sat)}$(1)	Collector-Emitter Saturation Voltage	I_C = 5A	I_B = 1.0A			1.0	V
			T_A = 125°C			2	
		I_C = 8A	I_B = 4A			2	
$V_{BE(sat)}$(1)	Base-Emitter Saturation Voltage	I_C = 5A	I_B = 1.0A			1.6	

DYNAMIC CHARACTERISTICS

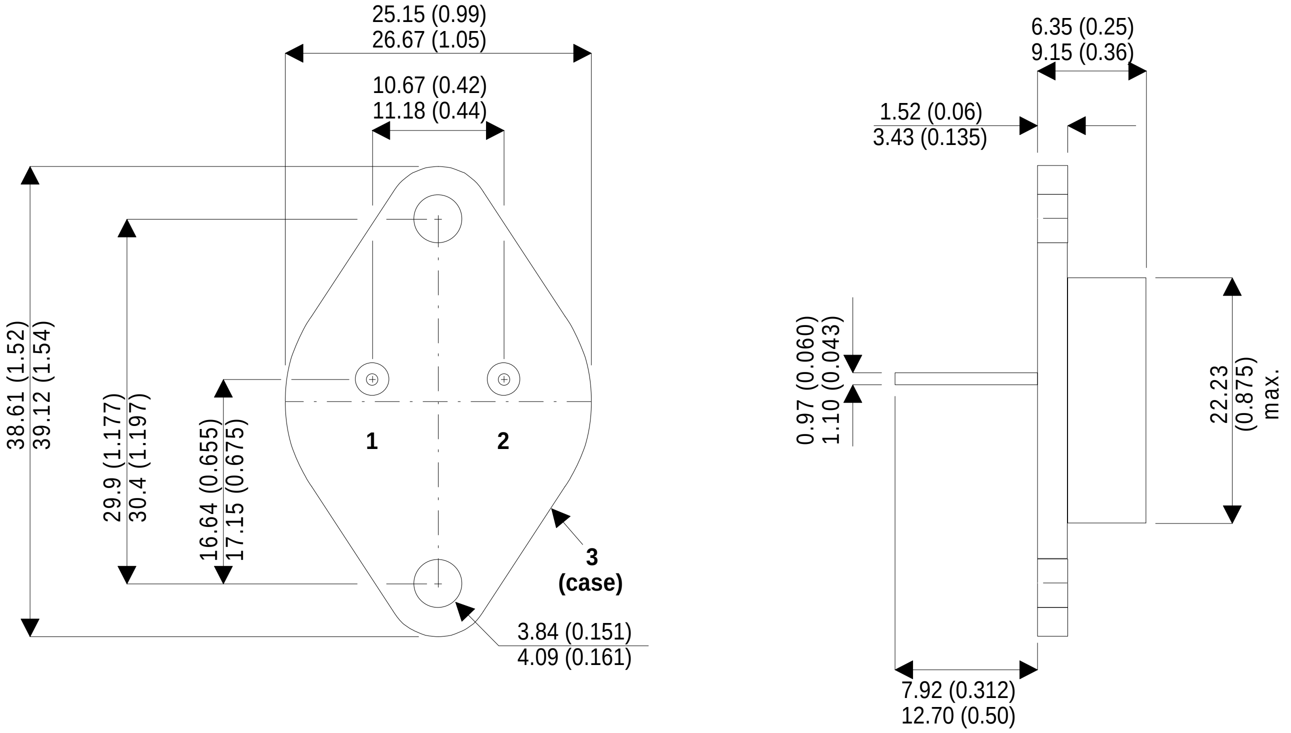
$\|h_{fe}\|$	Magnitude of small signal short circuit forward current transfer ratio	I_C = 200mA f = 5 MHz	V_{CE} = 10V	2	3		-
C_{obo}	Output Capacitance	V_{CB} = 10V f = 1.0MHz	I_E = 0			300	pF
t_d	Delay time	V_{CC} = 125V I_{B1} = $-I_{B2}$ = -1.0A	I_C = 5.0A			0.1	µs
t_r	Rise Time					0.59	
t_s	Storage Time					4	
t_f	Fall Time					0.42	

Notes

(1) Pulse Width ≤ 300us, δ ≤ 2%

MECHANICAL DATA

Dimensions in mm (inches)



TO3 (TO-204AA) METAL PACKAGE

Underside View

Pin 1 - Base Pin 2 - Emitter Case - Collector