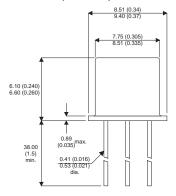
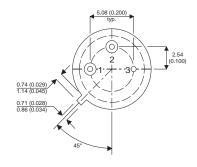




MECHANICAL DATA

Dimensions in mm (inches)





TO-5 (TO-205AA)

Underside View

1 = Emitter 3 = Collector 2 = Base

NPN BIPOLAR POWER SWITCHING TRANSISTORS

FEATURES

- FAST SWITCHING
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS

APPLICATIONS

- HIGH SPEED SWITCHING CIRCUITS
- POWER AMPLIFIERS

ABSOLUTE	2N5662	2N5663		
V_{CBO}	Collector – Base Voltage	250V	400V	
V_{CEO}	Collector – Emitter Voltage (I _B = 0)	200V	300V	
V_{EBO}	Emitter – Base Voltage (I _C = 0)	6V		
I_{B}	Base Current	0.5A		
I _C	Collector Current	2.0A		
P_{D}	Power Dissipation @ T _C = 25°C	35W	26W	
P_{D}	Power Dissipation @ T _A = 25°C	2.0W	1.0W	
$R_{ heta JC}$	Thermal Resistance Junction to Case	5.0°C/W	6.67°C/W	
$R_{ hetaJA}$	Thermal Resistance Junction to Ambient	87.5°C/W	175.4°C/W	
T_J , T_STG	Operating and Storage Junction Temperature Range	nperature Range –65 to +200°C		

Semelab PIc 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.

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ELECTRICAL CHARACTERISTICS - 2N5666 ($T_A = 25^{\circ}C$ unless otherwise stated)

	Parameter	Test Conditions		Min.	Тур.	Max.	Unit	
V _{(BR)CEO} *	Collector – Emitter	2N5662	I _C = 10mA		200			
	Breakdown Voltage	2N5663			300			V
V _{(BR)EBO}	Emitter – Base Breakdown \	/oltage	I _E = 10μA		6.0			
I _{CES}	Collector – Emitter Cut-off Current (I _B = 0)		$V_{CE}^{1} = 200V$	$V_{CE}^2 = 300V$			0.2	μΑ
I _{CBO}	Collector – Base Cut-off Current		$V_{CB}^{1} = 200V$	$V_{CB}^2 = 300V$			0.1	μΑ
			$V_{CB}^{1} = 250V$	$V_{CB}^2 = 400V$			1.0	mA
V _{CE(sat)} *	Collector Emitter Seturation Voltage	n Voltago	I _C = 1.0A	$I_{B} = 0.1A$			0.4	
	Collector – Emitter Saturation Voltage		I _C = 2.0A	$I_{B} = 0.4A$			8.0	.,
V _{BE(sat)} *	Base – Emitter On Voltage		I _C = 1.0A	I _B = 0.1A			1.2	- V
			I _C = 2.0A	$I_{B} = 0.4A$			1.5	
h _{FE} *	DC Current Gain	2N5662	I _C = 50mA	V _{CE} = 2V	40			_
		2N5663	$I_C = 50 \text{mA}$	V _{CE} = 2V	25			
		2N5662	I _C = 0.5A	V _{CE} = 5V	40		120	
		2N5663	$I_{\rm C} = 0.5A$	$V_{CE} = 5V$	25		75	
		Both	I _C = 1.0A	$V_{CE} = 5V$	15			
		Both	I _C = 2.0A	V _{CE} = 5V	5.0			
	Output Capacitance		V _{CB} = 10V	I _E = 0A			45	_
C _{obo}		100kHz < f < 1MHz				45	pF	
[h _{fe}]	Small Signal Current Gain		f = 10MHz		0.0		7.0	_
			I _C = 0.1A	$V_{CE} = 5V$	2.0			
t _{on}	Turn on time		I _{B1} ¹ ₌ 15mA	$I_{B1}^2 = 25 \text{mA}$			0.25	
			I _C = 0.5A	$V_{CC} = 100V$				
t _{off}	T aff time a	2N5662	$I_{B1}^{1} = -I_{B2} = 15mA$				0.85	μs
	Turn off time 2N566		$I_{B1}^2 = -I_{B2} = 25 \text{mA}$				1.2	
			$I_C = 0.5A$ $V_{CC} = 100V$					

NOTES

* Pulse Test: t_p = 300 μ s, $\delta \le 2\%$

1) Value for the 2N5662

2) Value for the 2N5663

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