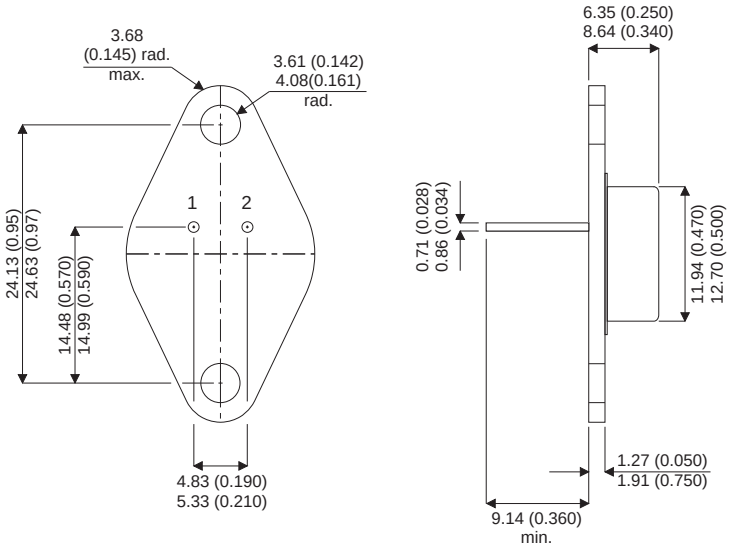
2N6315
2N6317

MECHANICAL DATA
Dimensions in mm (inches)



TO–66 (TO-213AA)

Pin 1 –Base Pin 2 –Emitter Case – Collector

COMPLEMENTARY SILICON MEDIUM POWER TRANSISTORS

COMPLEMENTARY TRANSISTORS
2N6315 (NPN) AND 2N6317 (PNP)

FEATURES
- **Low Collector Emitter Saturation Voltage**
- **Low Leakage Current**
- **Excellent DC Current Gain**

APPLICATIONS:
Designed for general purpose amplifier and switching applications.

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

V_{CEO}	Collector – Emitter Voltage		60V
V_{CBO}	Collector – Base Voltage		60V
V_{EBO}	Emitter – Base Voltage		5V
I_C	Collector Current	Continuous	7A
		Peak	15A
I_B	Base Current		2A
P_D	Total Dissipation @ T_C = 25°C		90W
	Derate above 25°C		0.515W/°C
T_{STG} , T_J	Operating and Storage Junction Temperature Range		–65 to +200°C
$R_{\theta JC}$	Thermal Resistance – Junction - Case		1.94°C/W

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

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SEME LAB

2N6315
2N6317

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
	OFF CHARACTERISTICS						
$V_{CEO(sus)}$	Collector – Emitter Sustaining Voltage *	I_C = 100mA	I_B = 0	60			V
I_{CEO}	Collector Cut–off Current	V_{CE} = 30V	I_B = 0			0.5	mA
I_{CEX}	Collector Cut–off Current	V_{CE} = 60V	$V_{BE(off)}$ = 1.5V			0.25	
			T_C = 150°C			2.0	
I_{CBO}	Collector Cut–off Current	V_{CB} = 60V	I_E = 0			0.25	
I_{EBO}	Emitter Cut–off Current	V_{EB} = 5V	I_C = 0			1.0	
	ON CHARACTERISTICS *						
h_{FE}	DC Current Gain	V_{CE} = 4V	I_C = 0.5A	35			—
		V_{CE} = 4V	I_C = 2.5A	20		100	
		V_{CE} = 4V	I_C = 7.0A	4			
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 4A	I_B = 0.4A			1.0	V
		I_C = 7A	I_B = 1.75A			2.0	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	I_C = 7A	I_B = 1.75A			2.5	
$V_{BE(on)}$	Base – Emitter On Voltage	V_{CE} = 4V	I_C = 2.5A			1.5	
	DYNAMIC CHARACTERISTICS						
C_{ob}	Output Capacitance	V_{CB} = 10V f = 1MHz	I_E = 0			300	pF
f_T	Current Gain – Bandwidth Product	V_{CE} = 10V I_C = 0.25A f = 1MHz		4.0			MHz
h_{fe}	Small Signal Current Gain	V_{CE} = 4V f = 1kHz	I_C = 0.5A	20			—
	DYNAMIC CHARACTERISTICS						
t_r	Rise Time	V_{CC} = 30V				0.7	µS
t_S	Storage Time	I_C = 2.5A				1.0	
t_f	Fall Time	I_{B1} = I_B =0.25A				0.8	

Notes

*Pulse test: t_p = 300µs , Duty Cycle = 2%

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