



MECHANICAL DATA

Dimensions in mm (inches)

6.35 (0.250) 8.64 (0.340) 3.68 (0.145) rad 3.61 (0.142) 4.08(0.161) max (0.028) 1 2 (0.470) 24.13 (0.95) 24.63 (0.97) 0 0 0.71 (14.48 (0.570) 14.99 (0.590) 11.94 (12.70 (1.27 (0.050) 4.83 (0.190) 1.91 (0.750) 5.33 (0.210) 9.14 (0.360) min

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.

TO-66 (TO-213AA)

Pin 1 -Base

Pin 2 -Emitter

Case - Collector

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

		3			
$\overline{V_{CEO}}$	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		
$R_{ heta JC}$	Thermal Resistance – Junction - Case		1.94°C/W		

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.

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

	Parameter	Test Conditions		Min.	Тур.	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					
I _{CEX}	Collector Cut-off Current	V _{CE} = 60V	$V_{BE(off)} = 1.5V$ $T_C = 150^{\circ}C$			0.25 2.0					
I _{CBO}	Collector Cut-off Current	V _{CB} = 60V	I _E = 0			0.25	– mA –				
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	I _C = 4A	$I_{B} = 0.4A$			1.0	_ V				
	Voltage	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	$I_{\rm C} = 2.5 A$			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					
t _s	Storage Time	I _C = 2.5A				1.0	μS				
t _f	Fall Time	$I_{B1} = I_{B} = 0.25A$				0.8					

Notes

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^{*}Pulse test: $t_p = 300 \mu s$, Duty Cycle = 2%