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DUAL NPN PLANAR TRANSISTORS IN TO77 PACKAGE

PIN 1 – Collector 1	PIN 4 – Emitter 2
PIN 2 – Base 1	PIN 5 – Base 2
PIN 3 – Emitter 1	PIN 6 – Collector 2

ABSOLUTE MAXIMUM RATINGS

	(T _{amb} = 25°C unless otherwise stated)			TOTAL DEVICE		
V _{CBO}	Collector – Base Voltage		60V			
V _{CEO}	Collector – Emitter Voltage	Collector – Emitter Voltage ¹				
V _{EBO}	Emitter – Base Voltage	Emitter – Base Voltage				
I _C	Continuous Collector Curre	Continuous Collector Current				
PD	Total Device Dissipation	T _{AMB} = 25°C	300mW	500mW		
		Derate above 25°C	1.72mW / °C	2.86W/°C		
PD	Total Device Dissipation	T _C = 25°C	750mW	1.5W		
		Derate above 25°C	4.3mW / °C	8.6mW / °C		
T _{STG}	Storage Temperature Range		-65 to 200°C			
Τ _L	Lead temperature (Solderin	Lead temperature (Soldering, 10 sec.)		300°C		



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	Parameter	Test Conditions 1		Min.	Тур.	Max.	Unit
INDIVIDU	AL TRANSISTOR CHARACTERISTIC	S					
V _{(BR)CBO}	Collector – Base Breakdown Voltage	l _C = 10μΑ	ι _E = 0	60			T
V _{(BR)CEO*}	Collector – Emitter Breakdown Voltage	l _C = 10mA	I _B ≃ 0	60			V
V _{(BR)EBO}	Emitter - Base Breakdown Voltage	l _E = 10μΑ	I _C = 0	6			
ICBO	Collector Cut-off Current	V _{CB} = 45V	I _E = 0			2	nA
			T _A = 150°C			10	μΑ
ICEO	Collector Cut-off Current	V _{CE} = 5V	I _B = 0			2	nA
I _{EBO}	Emitter Cut-off Current	V _{EB} = 5V	I _C = 0			2	
h _{FE}	DC Current Gain	V _{CE} = 5V	l _C = 10μA	150		600	
			T _A = -55°C	40			
		V _{CE} = 5V	I _C = 100μΑ	225			
		V _{CE} = 5V	I _C = 1mA	300			
V _{BE}	Base – Emitter Voltage	V _{CE} = 5V	I _C = 100μA			0.70	V
V _{CE(sat)}	Collector - Emitter Saturation Voltage	I _B = 100μA	l _C = 1mA			0.35	
h _{ib}	Small Signal Common – Base	V _{CB} = 5V	l _C = 1mA	05	25 32	32 4	
	Input Impedance	f = 1kHz		20			54
h _{ob}	Small Signal Common – Base	V _{CB} = 5V	I _C = 1mA				umbo
	Output Admittance	f = 1kHz				1	
h _{fe}	Small Signal Common – Base	V _{CE} = 5V	I _C = 500μA	A a			
	Current Gain	f = 20MHz		3			
Cobo	Common – Base Open Circuit	V _{CB} = 5V	I _E = 0			6	
	Output Capacitance	f = 140kHz to 1MHz					P'

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

* Pulse Test: $t_p = 300\mu s$, $\delta \le 1\%$.

Parameter		Test Conditions		Min.	Тур.	Max.	Unit	
TRANSISTOR MATCHING CHARACTERISTICS								
h _{FE1}	Static Forward Current Gain	V _{CE} = 5V	I _C = 100μA	0.0		1	_	
h _{FE2}	Balance Ratio	See Note 2.		0.9		1		
V _{BE1} – V _{BE2}	Base – Emitter Voltage Differential	V _{CE} = 5V	I _C = 100μA			3	m∨	
		V _{CE} = 5V	I _C = 10μA to 1mA		5	5		
$ \Delta(V_{BE1} - V_{BE}) $	2) ΔT_{A}	V _{CE} = 5V I _C = 100μA				0.0		
	Base – Emitter Voltage Differential	T _{A1} = 25°C	T _{A2} = -55°C		1	0.0	m	
	Change With Temperature	V _{CE} = 5V	I _C = 100μA			1		
		T _{A1} = 25°C	T _{A2} = 125°C			1		