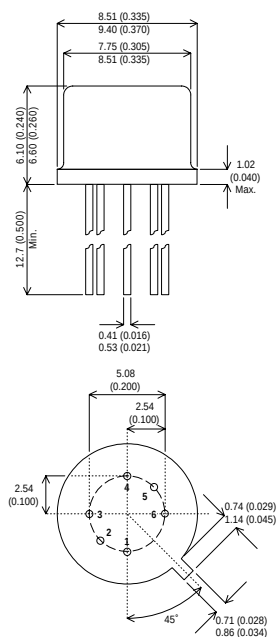


MECHANICAL DATA

Dimensions in mm (inches)



COMPLEMENTARY DUAL GENERAL PURPOSE TRANSISTOR NPN / PNP SILICON

TO77 PACKAGE

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

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V _{CEO}	Collector – Emitter Voltage		30V	
V _{CBO}	Collector – Base Voltage		50V	
V _{EBO}	Emitter – Base Voltage		5.0V	
I _C	Collector Current		500mA	
T _J , T _{stg}	Operating and Storage Junction Temperature Range		–65 to +200°C	
P _D	Total Device Dissipation	@ T _A = 25°C Derate above 25°C	Per Side	Total Device
			575mW	625mW
P _D	Total Device Dissipation	@ T _C = 25°C Derate above 25°C	3.29mW/°C	3.57mW/°C
			1.8mW	2.5mW
			10.3mW/°C	14.3mW/°C

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
V _{(BR)CEO} *	Collector – Emitter Breakdown Voltage	I _C = 10mA	I _B = 0	30			V
V _{(BR)CBO}	Collector – Base Breakdown Voltage	I _C = 10μA	I _E = 0	50			
V _{(BR)EBO}	Emitter – Base Breakdown Voltage	I _E = 10μA	I _C = 0	5.0			
I _{BEV}	Base Cutoff Current	V _{CE} = 30V	V _{BE} = 3.0V			50	nA
I _{CEV}	Collector Cut-off Current	V _{CB} = 30V	V _{BE(off)} =3.0V			30	
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V	I _E = 0			100	
ON CHARACTERISTICS							
h _{FE}	DC Current Gain	I _C = 1.0mA	V _{CE} = 10V	40	70		—
		I _C = 150mA	V _{CE} = 10V	70	110		
		I _C = 300mA	V _{CE} = 10V	30	90		

THERMAL CHARACTERISTICS		Per Side	Total Device
$R_{\theta JC}$	Thermal Resistance Junction to Case	97°CW	70°CW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient ¹	304°CW	280°CW
Coupling Factor			
	Junction to Ambient	84%	
	Junction to Class		44%

$R_{\theta JA}$ is measured with the device soldered into a typical printed circuit board.¹

* Pulse Test: $t_p \leq 300\mu\text{s}$, $\delta \leq 2\%$.