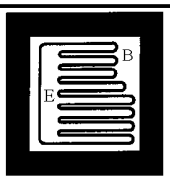
NEW ENGLAND SEMICONDUCTOR

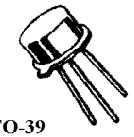
2N5322
2N5323

PNP SWITCHING TRANSISTORS

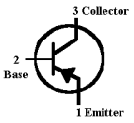
PNP
2075



1. Chip size.....75 x 75 mils ± 2 mils
2. Chip thickness.....8 - 12 mils nominal
3. Top metal.....Aluminum 25,000Å minimum, 30,000Å nominal
4. Back metal.....A. Ti/Ni/Ag 2kÅ/7kÅ/7kÅ min., 3kÅ/10kÅ/10kÅ nom.
   B. Gold 1,500Å minimum, 2,500Å nominal
5. Backside.....Collector
6. Bonding pad.....B – 19 x 8 mils, E – 35 x 8 mils



TO-39



MAXIMUM RATINGS

RATINGS	SYMBOL	2N5322	2N5323	UNITS
Collector-Emitter Voltage	V_{CEO}	75	50	Vdc
Collector-Base Voltage	V_{CBO}	100	75	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	5.0	Vdc
Base Current	I_B	1.0		Adc
Collector Current -- Continuous	I_C	2.0		Adc
Total Device Dissipation @ $T_C = 25^0C$ Derate Above 25^0C	P_D	10 0.057		W $mW/^0C$
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		^0C

THERMAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAX.	UNITS
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	17.5	$^0C/W$

ELECTRICAL CHARACTERISTICS ($T_A = 25^0C$ unless otherwise noted)

Characteristics		SYMBOL	Min	Max	UNITS
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage					
I_C = 100 mAdc, I_B = 0	2N5322	$V_{(BR)CEO}$	75		Vdc
	2N5323		50		
Collector Cutoff Current					
V_{CE} = 100 Vdc, V_{BE} = 1.5 Vdc	2N5322	I_{CEX}		0.1	mAdc
V_{CE} = 70 Vdc, V_{BE} = 1.5 Vdc, $T_C = 150^0C$	2N5322			5.0	
V_{CE} = 75 Vdc, V_{BE} = 1.5 Vdc	2N5323			0.1	
V_{CE} = 45 Vdc, V_{BE} = 1.5 Vdc, $T_C = 150^0C$	2N5323			5.0	
Emitter Cutoff Current					
V_{BE} = 7.0 Vdc, I_C = 0	2N5322	I_{EBO}		0.1	mAdc
V_{BE} = 5.0 Vdc, I_C = 0	2N5323			0.1	
ON CHARACTERISTICS (1)					
DC Current Gain					
I_C = 500 mAdc, V_{CE} = 4.0 Vdc	2N5322	h_{FE}	30	130	-
	2N5323		40	250	
I_C = 1.0 Adc, V_{CE} = 2.0 Vdc	2N5322		10	-	
Collector-Emitter Saturation Voltage					
I_C = 500 mAdc, I_B = 50 mAdc	2N5322	$V_{CE(sat)}$		0.7	Vdc
	2N5323			1.2	
Base-Emitter On Voltage					
I_C = 500 mAdc, V_{CE} = 4.0 Vdc	2N5322	$V_{BE(on)}$		1.1	Vdc
	2N5323			1.4	
SMALL-SIGNAL CHARACTERISTICS					
Small-Signal Current Gain					
V_{CE} = 4.0 Vdc, I_C = 50 mAdc, f = 10 MHz		h_{fe}	5.0		
SWITCHING CHARACTERISTICS					
Turn-On Time		t_{on}			ηs
V_{CC} = 30 Vdc, I_C = 500 mAdc, I_{B1} = 50 mAdc				100	
Turn-Off Time		t_{off}			ηs
V_{CC} = 30 Vdc, I_C = 500 mAdc, $I_{B1} = I_{B2}$ = 50 mAdc				1000	

(1)Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%.

NEW ENGLAND SEMICONDUCTOR
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