

Silicon NPN Power Transistors

2N5873 2N5874

DESCRIPTION

- With TO-3 package
- Low collector saturation voltage

APPLICATIONS

- For medium-speed switching and amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a =$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
			80	
V_{CEO}	Collector-emitter voltage	Open base	60	V
			80	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		7	A
P_D	Total Power Dissipation	$T_C = 25$	115	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.17	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	2N5873	$I_C=0.1A; I_B=0$	60			V
		2N5874		80			
V_{CEsat}	Collector-emitter saturation voltage		$I_C=5A; I_B=0.5A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage		$I_C=5A; I_B=0.5A$			1.5	V
I_{CBO}	Collector cut-off current		$V_{CB}=rated V_{CBO}; I_B=0$			1.0	mA
I_{CEO}	Collector cut-off current	2N5873	$V_{CE}=30V; I_B=0$			2.0	mA
		2N5874	$V_{CE}=40V; I_B=0$				
I_{EBO}	Emitter cut-off current		$V_{EB}=5V; I_C=0$			1.0	mA
h_{FE}	DC current gain		$I_C=2.5A; V_{CE}=4V$	20		100	
f_T	Transistion frequency		$I_C=0.5A; V_{CE}=10V$	4			MHz

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PACKAGE OUTLINE

