

Silicon NPN Power Transistors

2SD841

DESCRIPTION

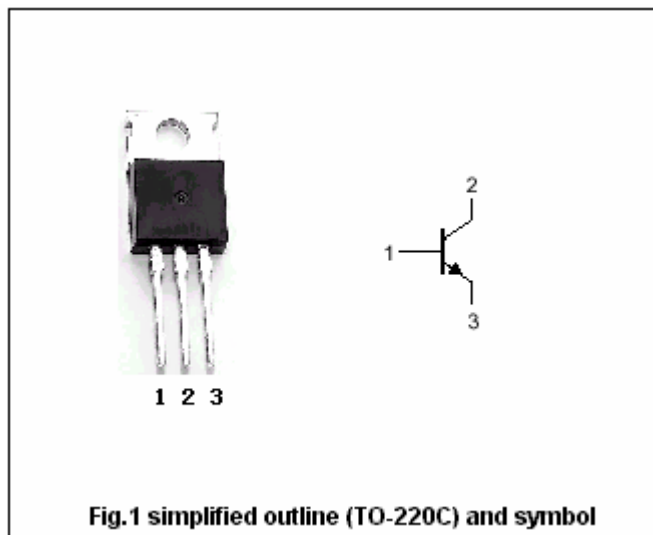
- With TO-220 package
- Low collector saturation voltage
- High speed switching
- High voltage: $V_{CBO}=800V(\text{Min})$

APPLICATIONS

- High voltage switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	800	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		3	A
I_B	Base current		1.5	A
P_C	Collector power dissipation	$T_c=25^\circ\text{C}$	40	W
		$T_a=25^\circ\text{C}$	2	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA, I _B =0	400			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =0.5A; I _B =50mA			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =0.5A; I _B =50mA			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =800V; I _E =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
h _{FE-1}	DC current gain	I _C =10mA; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =0.5A; V _{CE} =5V	10			
f _T	Transition frequency	I _E =-0.1A; V _{CE} =10V		4		MHz
C _{OB}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		75		pF
t _f	Fall time	I _C =0.5A; I _{B1} =-I _{B2} =50mA V _{CC} =200V; R _L =400Ω			1.0	μs

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)