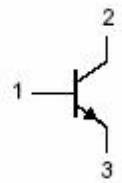
isc Silicon NPN Power Transistor — 2SD841



PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

DESCRIPTION

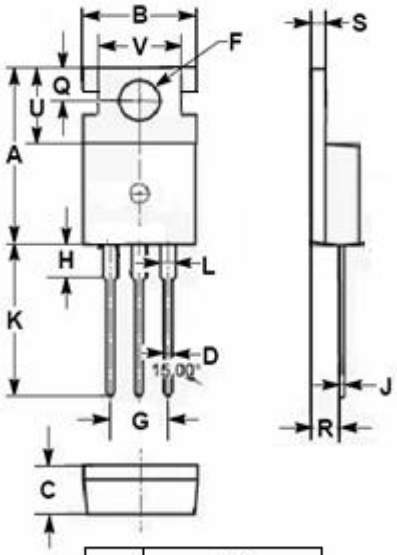
- High Collector-Base Breakdown Voltage
  : $V_{(BR)CBO}$= 800V(Min.)
- High Switching Speed
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V(Max.)@ I_C= 0.5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for voltage switching applications.

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation@T_C=25℃	40	W
	Collector Power Dissipation@T_a=25℃	1.5	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 0.5A; I_B= 50mA			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 0.5A; I_B= 50mA			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V; I_E= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 10mA; V_{CE}= 5V	8			
h_{FE-2}	DC Gurrent Gain	I_C= 0.5A; V_{CE}= 5V	10			
f_T	Current-Gain—Bandwidth Product	I_E= 0.1A; V_{CE}= 10V		4		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		75		pF
t_f	Fall Time	I_C= 0.5A; I_{B1}= I_{B2}= 50mA; R_L= 400Ω; V_{CC}≈ 200V			1.0	μs