

isc Silicon NPN Power Transistor
2SD841
DESCRIPTION

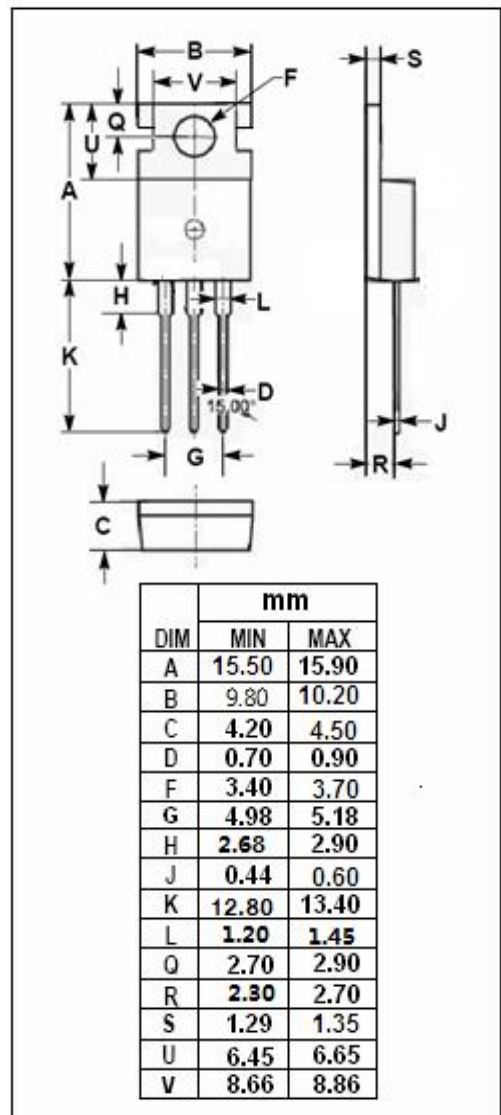
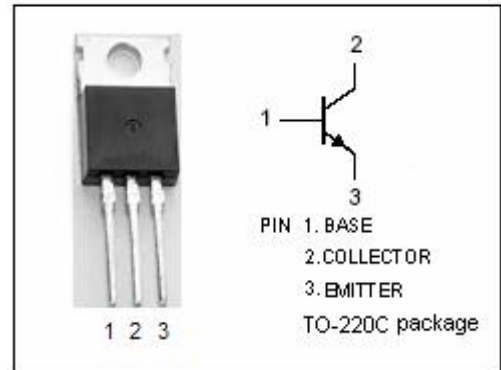
- High Collector-Base Breakdown Voltage
: $V_{(BR)CBO} = 800V(\text{Min.})$
- High Switching Speed
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max.}) @ I_C = 0.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for voltage switching applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

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°C	40	W
	Collector Power Dissipation@T _a =25°C	1.5	
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon NPN Power Transistor**2SD841****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=800\text{V}; I_E=0$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			1.0	mA
h_{FE-1}	DC Current Gain	$I_C=10\text{mA}; V_{CE}=5\text{V}$	8			
h_{FE-2}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	10			
f_T	Current-Gain—Bandwidth Product	$I_E=0.1\text{A}; V_{CE}=10\text{V}$		4		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		75		pF
t_f	Fall Time	$I_C=0.5\text{A}; I_{B1}=I_{B2}=50\text{mA}; R_L=400\Omega; V_{CC}\approx 200\text{V}$			1.0	μs

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